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ABSTRACT

A study was designed to identify and clarify relationships between naturally observed, task-measured, and elicited instances of kindergarten children's role-taking, prosocial behavior and sharing behavior. An additional goal of the study was to illuminate possible relationships between prosocial behavior and children's temperamental characteristics, parental personality characteristics, and parents' child rearing techniques. Subjects were 26 children of 5 and 6 years of age and their mothers. Subject variables were dispersed as they naturally occurred in the classroom group. Analyses of the data revealed support for hypotheses regarding relationships between prosocial behavior and temperament ratings and parent practices. The existence of a predictive relationship between temperament, parent practices, and prosocial behavior was partially supported. Not supported were the prediction of a relationship between role-taking and prosocial behavior, and between role-taking and intelligence quotient; and the prediction that the parent dependency score would be positively correlated with the prosocial behavior score. Findings are discussed in terms of measurement characteristics and implications of the findings for future research. Related materials, such as nine pages listing references and instruments used, are appended. (RH)

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The Relationship of Role-Taking, Temperament, and Parent Behaviors to Prosocial Behaviors in Children

by

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WAKE FOREST UNIVERSITY

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TABLE OF CONTENTS

	PAGE
LIST OF TABLES	iv
LIST OF APPENDICES	vi
ABSTRACT	vii
INTRODUCTION	1
METHOD	16
RESULTS	27
DISCUSSION	56
REFERENCES	75
APPENDICES	84
VITA	114

LIST OF TABLES

		Page
Table 1.	Means for Observations of Prosocial Behaviors and Totals	29
Table 2.	Parent Practices: Means and Correlations with Prosocial Behaviors and Totals	30
Table 3.	Parent Practices: Intercorrelations and Correlations with Role-Taking.	33
Table 4.	Temperament Ratings: Means and Correlations with Prosocial Behaviors and Totals.	34
Table 5.	Multiple Regression Coefficients for Predictors of Prosocial Behavior and Sharing Scores	36
Table 6.	Results of Discriminant Function Analyses of Sharing from Observations	38
Table 7.	Results of Discriminant Function Analyses of Sharing Situation.	40
Table 8.	Discriminant Function Analysis of Sharing Index	41
Table 9.	Discriminant Function Analysis of Total Score from Observations.	42
Table 10.	Discriminant Function Analysis of Prosocial Index	43
Table 11.	Role-Taking Measures: Means and Correlations with Prosocial Behaviors	45

Table 12. Parent Dependency: Means and Correlations with Prosocial Behaviors, Demographic Variables, and Parent Practices. 48

Table 13. Number of Siblings and Birth Order: Means and Correlations 50

Table 14. Two-tailed T-test Comparisons: Gender 53

Table 15. Two-tailed T-test Comparisons: Marital Status . . 54

Table 16. Intercorrelations Among Observations of Prosocial Behavior 55

LIST OF APPENDICES

		Page
APPENDIX A	Subject Variables.	82
APPENDIX B	Affective Role-Taking--Interpersonal Awareness Scale Part B	85
APPENDIX C	Cognitive Role-Taking Task--Birthday Gift. . . .	92
APPENDIX D	Perceptual Role-Taking Task--Picture Cube. . . .	93
APPENDIX E	Peabody Picture Vocabulary Test--Instructions . .	95
APPENDIX F	Parental Consent Form	99
APPENDIX G	Family Demographics	101
APPENDIX H	Parental Dependence Measure	103
APPENDIX I	Parental Attitudes and Child-Rearing Practices . .	105
APPENDIX J	Ratings of Child's Temperament	111

Cain, Suzanne Holloway

THE RELATIONSHIP OF ROLE-TAKING, TEMPERAMENT, AND PARENT BEHAVIORS TO PROSOCIAL BEHAVIORS IN CHILDREN

Thesis under the direction of Deborah L. Best, Ph.D., Associate Professor of Psychology.

The study of prosocial behavior in children is an area which has received a great deal of attention in recent years. Such behaviors as helping, sharing, comforting, and cooperation have been the focus of many studies which have attempted to determine various relationships among these behaviors, and possible correlations with other behaviors and variables. Such variables as role-taking abilities and child-rearing practices used by parents have shown inconsistent relationships to prosocial behavior in children. Personality characteristics of the child and parents have not been explored to any extent in terms of their relationship to prosocial behavior in children.

It was hypothesized that three tasks of role-taking ability, parent practices, parent dependency, and the temperament areas of activity and sociability would be significantly correlated with various indices of prosocial behavior. It was also predicted that the I.Q. measure would be significantly correlated with the three role-taking tasks. A hypothesis was made regarding a combination of particular temperament ratings and/or parent practices to predict a given child's score for prosocial behavior, and sharing, in particular.

To test these hypotheses, a classroom of 26 five- and six-year old children were observed for their prosocial behavior, given role-taking tasks, an I.Q. measure, and participated (in randomly assigned pairs) in a sharing situation. The mothers of these children provided family demographic information (marital status, birth order of child, and number of siblings). The mothers also completed a parent dependency measure and ratings of child-rearing techniques.

Analyses of the data revealed support for the hypotheses regarding relationships between prosocial behavior and temperament ratings and parent practices. The hypothesis regarding a predictive relationship between temperament, parent practices, and prosocial behavior was partially supported. The prediction of a relationship between role-taking and prosocial behavior and between role-taking and I.Q. was not supported. Results opposite those expected were found regarding parent dependency and prosocial behavior. The findings are discussed in terms of measurement characteristics and implications for future research.

INTRODUCTION

The study of prosocial behavior in children is an area which has received a great deal of attention in recent years. Such behaviors as helping, sharing, comforting, and cooperation have been the focus of many studies which have attempted to determine various relationships among these behaviors, and possible correlations with other behaviors and variables. Two capacities, in particular, have been studied in conjunction with prosocial behavior: role-taking and empathy. However, current research supports only an intuitive association between these three areas; empirical evidence linking role taking, empathy, and prosocial behavior is inconsistent at best (Eisenberg, 1982; Iannotti, 1982; Radke-Yarrow, Zahn-Waxler, & Chapman, 1983).

The terms prosocial behavior, role taking and empathy are terms which have only recently been carefully defined and separated from the large field of research which began as the study of altruism among social psychologists in the 1960s. Prosocial behavior is defined simply by Staub (1979) as "behavior that benefits other people" (p. 2) or as being more appropriate to another's situation than to one's own (Hoffman, 1982). Staub (1979) also states that "in order to behave positively (prosocially) a person has to understand another's needs, desires, or goals" (p. 2). This understanding is what is referred to by many researchers as role-taking. Thus, in order for a child to act prosocially (i.e., to help, share, comfort, cooperate, or donate), he or she must comprehend that another person needs help, is in distress, or would also like an object which the child could share with him or her. Some researchers believe that in addition to this understanding of

another person's separate inner state (i.e., role taking), a vicarious experiencing of the other person's emotions, or a concern for the other person's needs is required for prosocial behavior to occur. Feshbach and Roe (1968) and Hoffman, (1982) refer to this vicarious emotional experience or concern for the other's feelings as empathy. These two researchers have included both role-taking or a "cognitive" understanding, and the emotional experience of, or concern for others' feelings, in their definitions of empathy as an underlying component of prosocial behavior.

An issue which separates researchers within the field of empathy is to what extent cognitive and affective factors determine empathy. While some approach empathy as a type of role-taking (Borke, 1971; Chandler & Greenspan, 1972; Dymond, 1949; Flavell et al., 1968; Piaget, 1932), others believe that affective matching, or the experiencing of a similar emotional state must occur between self and other for empathy to be said to have occurred (Berger, 1962; Feshbach & Roe, 1968; Hoffman, 1982; Stotland, 1969; Stotland, & Walsh, 1963). Still, others (Ford, 1979; Shantz, 1975; Underwood & Moore, 1982) deal with empathy in terms of affective role taking, or the ability to distinguish and understand the emotional responses of others. Another view of empathy can be described as an emotional response of concern for the well-being of another (Batson & Coke, 1981), and some researchers (e.g., Bryant, 1982; Davis, 1983; Mehrabian & Epstein, 1972) believe empathy to involve both affective matching and concern for the welfare of another.

Empathy

Hoffman's developmental theory of empathy represents an attempt to combine some of the various discrepant views of empathy. In doing so, Hoffman has not only provided a framework for the combination of role-taking and empathy through development, but also has put forth an explanation for the relationship of those capacities with actual prosocial behaviors. This conceptual link proposed by Hoffman has been supported by anecdotal (Hoffman, 1975) and observational (Zahn-Waxler & Radke-Yarrow, 1982) evidence; yet studies attempting to relate role-taking, empathy, and prosocial behavior as assessed by various tasks and contrived situations have not found consistent relationships.

To summarize, in Hoffman's theory empathy is described in terms of gradually emerging sense of the distinction between self and other during infancy. Four steps in the formation of a cognitive sense of other are as follows:

1. For most of the first year, children appear to experience a fusion of self and other.

2. By about 12 months, they attain "person permanence" and become aware of others as physical entities distinct from the self.

3. By 2 or 3 years of age, they acquire a rudimentary sense of others as having inner states (thoughts, perceptions, feelings) independent of their own, although they cannot yet discern the other's inner states. This is the initial step in role taking. Later they become able to discern what the other's inner states are, progressing from simple to complex states.

4. By late childhood or early adolescence, they become aware of others as having personal identities and life experiences beyond the immediate situation (Hoffman, 1982, p. 286).

Hoffman also details levels of empathic distress which result from a synthesis of affect and cognitive awareness of other. 1) Global empathy is an empathic distress response which is a combination of unpleasant feedback from the infant's own body, from the dim perception of other, and from the situation. Thus, at this stage, the infant's reactions to the distress of another person are not prosocial; that is, the infant is responding more to his or her own, than to the other's distress. However, these early reactions of empathic distress may form the basis of later, more highly prosocial responses to another's distress (Hoffman, 1982). Crying responses to the cries of other infants have been reported in newborn babies (Sagi & Hoffman, 1976; Simner, 1971) and in 8-12 month old infants (Zahn-Waxler & Radke-Yarrow, 1982).

Between the first and second stages as person permanence emerges, the child may be, at times, vaguely aware of the difference between self and other; thus, in response to the distress of another, the child may react as though the self and the dimly perceived other were either simultaneously or alternately in distress. Hoffman (1982) gives an example of such a response: an infant at 20 months might respond to another child's crying by alternately touching and patting himself or herself and the distressed child, as though he or she were not certain of the difference between his or her own and the other's distress.

2) In "egocentric" empathy, the child is fully aware of the physical distinction between self and other, but cannot fully

distinguish between inner states belonging to self and other. This early form of empathy might appear around ages 2 and 3. An example of an early prosocial behavior at this age is a child bringing to a distressed person his or her own favorite toy (Hoffman, 1982). Although the toy may not be the most appropriate way to comfort mother or another adult, such responses appear to be early attempts at prosocial behaviors such as comforting and helping.

3) Empathy for another's feelings and the beginnings of role taking abilities appear (i.e., the understanding that the feelings, perspectives, and interpretations of events of others may be different from one's own). Children are more responsive to cues indicative of the feelings of others, and can eventually express empathic arousal for a person who is absent. At the ages of 3-5, children should show basic role taking abilities (Borke, 1971) and may exhibit empathy and concern for others through their expressions and by attending to and responding prosocially to the distress of others (Radke-Yarrow et al., 1983). Thus, between the ages of three and five, children should show a great deal of qualitative and quantitative change in the prosocial behaviors they exhibit.

Hoffman's developmental theory is a useful means of organizing and synthesizing the cognitive and affective process which seem to underly empathy and prosocial behavior. However, this theory can account only for prosocial behaviors which occur in response to distress in others. Such behaviors as spontaneous sharing or cooperation are also considered to be prosocial in nature, yet their relationship to empathy and role taking is not as conceptually or empirically clear.

Sharing

One prosocial behavior in particular, sharing, has shown inconsistent relationships to role-taking and empathy. Although relatively few studies have focused on sharing as a prosocial behavior, spontaneous sharing involves the perception of a need or wish of the other person, and a realization on the part of the child that he or she has something the other person wants. Such an understanding, combined with concern for the feelings of the other person, would seem to be components of sharing, in addition to a willingness to sacrifice some of the desired possession. Thus, in sharing, a child puts the interests of another before his or her own, which is a basic requirement for a behavior considered to be prosocial in nature.

Sharing has been found to occur "naturally" within the normal kindergarten classroom environment during observations at a rate of about 2.7 incidents per hour (Eisenberg-Berg & Hand, 1979). However, sharing has usually been studied in the context of a contrived situation, with the recipient being a hypothetical child (Hull & Reuter, 1977; Midlensky & Bryan, 1967), a hypothetical charity, or an adult (Rushton & Weiner, 1975; Staub, 1971). These studies have not provided results which are generalizable to actual sharing behavior among peers, as interactions with other children were not involved in the sharing paradigms used. Thus, little is known about variables which are related to sharing with peers in the natural environment.

Similar criticisms regarding generality have been levied against studies attempting to find relationships between role-taking, empathy, and prosocial behavior. The relationship between role-taking, empathy,

and prosocial behavior proposed by Hoffman has been supported by anecdotal and observational evidence (Hoffman, 1982; Zahn-Waxler & Radke-Yarrow, 1982). However, many studies using various tasks to assess role-taking, verbal measures of empathy, and contrived situations for eliciting prosocial behavior find no relationship between these cognitive, affective, and behavioral measures. A possible explanation for failures to establish such a relationship may lie in the measures and situations used in these studies. Many cognitive and affective assessments of role-taking, empathy, and prosocial tendencies have been criticized as being artificial and thus, failing to generalize to actual behaviors (Eisenberg-Berg & Lennon, 1980; Emler & Rushton, 1974; Ianotti, 1975, 1978; Kurdek, 1978; Levine & Hoffman, 1975; Marcus, Telleen, & Roke, 1979; Rushton & Weiner, 1975; Sawin, 1979; Waxler, Yarrow, & Smith, 1977).

Role-taking

Role taking has usually been measured by children's responses on tasks of: 1) perceptual role taking--the child is asked to view or interpret events from a physical perspective which is different from his or her own; 2) cognitive role taking--the child is asked to take the perspective of another person in terms of the other's level of information or the other's cognitions; 3) affective role taking--the child is asked to interpret the feelings and emotions another character or person would have in a particular situation. Such tasks have been widely used (Barnett, 1984; Flavell, 1968; Iannotti, 1978; Selman, 1971; Zahn-Waxler, Radke-Yarrow, & Brady-Smith, 1977) and are reliable measures in themselves (Kurdek, 1978). However, their use in studies

attempting to relate role taking to empathy or to prosocial behavior, has been rather indiscriminate. That is, scores on perceptual, cognitive and affective role taking tasks are often compared to empathy scores and actual behavior, with each measure involving completely different cognitive and emotional domains.

For example, one study by Iannotti (1978) used 1) Flavell's (1968) Nickel-Dime Game as a role taking measure; 2) an empathy measure of children's emotional reactions to pictures and stories of children in various emotional situations; and 3) a measure of prosocial behavior using the number of candies shared with a hypothetical needy child. Studies similar to this one have been criticized on the grounds that 1) the measures and situations employed are artificial and do not generalize well to real behaviors (Kurdek, 1978) and 2) the measures encompass too wide a variety of emotions, cognitions, and behaviors, some of which may be competing or negatively related (i.e., the "tricking" involved in some cognitive role taking tasks) and empathy for another person, as in the Iannotti (1978) study (Cain, 1986).

Several measures of empathy have been criticized, especially the Feshbach and Roe Affective Situations Test for Empathy (Feshbach & Roe, 1968) which has been widely used with younger children. Some researchers believe that problems with empathy measures themselves may be responsible for inconsistent results linking empathy and prosocial behavior (Eisenberg, 1986; Hoffman, 1982; Radke-Yarrow et al., 1983). The approach to empathy measurement advocated by Hoffman (1982) and Zahn-Waxler and Radke-Yarrow (1982) is simply observing signs of concern, attention, and interest as they precede and accompany prosocial

behaviors. In this way, the emotional content of the empathic response and prosocial behavior are most likely to be related and within a single general emotional domain. This approach would seem easiest and most useful for studying young children who are spontaneous in expressing emotion and are not as susceptible to social desirability influences as older children.

Demographic and Individual Variables

Rather than focusing on role taking and empathy as explanations for developmental and individual differences in prosocial behavior, other researchers have looked to demographic, individual, and parental variables. Several variables such as gender, age, race, and behavioral tendencies have been included in studies of empathy and prosocial behavior. For example, some researchers report findings of higher rates of empathic responding (Eisenberg-Berg & Mussen, 1978; Feshbach, 1982; Hoffman & Levine, 1976; Levine & Hoffman, 1975) and higher scores on role taking performance (Ahammer & Murray, 1979; Baumrind, 1980; Borke, 1973) for females than for males. Others argue that there are no significant gender differences in empathy and prosocial behavior (Berman, 1980; Maccoby & Jacklin, 1974; Underwood & Moore, 1982) and that self-report measures may simply reflect a cultural expectation for females to respond in a more nurturing, affectionate way.

Another variable which has been considered a factor in empathy and prosocial behavior is the age of the child. Some researchers (Mussen & Eisenberg-Berg, 1977) state that empathy and prosocial behavior generally increase with age, possibly due to increases in the use of socialization techniques by parents as children grow older. However,

Radke-Yarrow et al. (1983) report that age-related increases in empathy and prosocial behavior are inconsistent at best. For example, in observations of comforting, sympathetic, and caregiving behaviors of 1-2 1/2 year olds, Zahn-Waxler and Radke-Yarrow (1982) report increases with age. On the other hand, Gottman and Parkhurst (1980) report decreases with age in these same behaviors among 2-9 year olds. Still other researchers have found either no changes with age (Berne, 1930; Feldman, Nash, & Cutrona, 1977; Sawin, 1980; Yarrow, Scott, & Waxler, 1973; Yarrow & Waxler, 1976) or both positive and negative increases in different behaviors with age (Staub, 1970). If one takes Hoffman's viewpoint (1982), age-related changes in prosocial behaviors should be described in terms of qualitative differences before quantitative differences can be considered.

Another class of variables, personality characteristics, also shows an inconsistent relationship to empathy and prosocial behavior in children. For example, Murphy (1937) found both aggressive and prosocial behavior to be related to teachers' ratings of sociability. These findings were replicated by Friedrich and Stein (1973) who found both verbal and physical aggression to be related to nurturing of other children in two- to four-year-old boys. However, Feshbach and Feshbach (1969) found empathy and aggression to be negatively correlated. In fact, Feshbach (1979) undertook an empathy training study based on the premise that increasing empathic awareness may result in decreased aggressive behavior: that is, if children are aware and concerned about the feelings of others, they will be less likely to behave in ways which may be harmful to others. Thus, empathy has been linked to aggressive

tendencies, in terms of general activity level, and yet, empathy is thought by others to be an opposing cognitive and affective state of aggressive behavior.

Mussen and Eisenberg-Berg (1977) generally conclude that "strong predispositions to prosocial behavior in nursery and elementary school children are associated with ego strength, self control, and good personal adjustment" (p. 70). It might be useful to explore the relationship between several types of behavioral tendencies, such as activity level, sociability, and emotionality, and how they relate to prosocial behavior. These sorts of general personality/behavioral variables might be best described as temperament (Thomas, Chess, Birch, Hertzig, & Korn, 1963). Temperament variables in combination with other factors (such as parental variables) could be considered as possible predictors of a child's prosocial behavior, should such relationships exist among the variables. Thus, a comparison of a child's temperament rating (by the parent) to his or her prosocial behaviors could illuminate the relationship of temperament to such behaviors.

Parental Variables

In addition to individual and personality characteristics of the child, parental personality and child rearing practices have shown some relationships with empathy and prosocial behaviors. Parents and family are generally acknowledged as one of, if not the most powerful, socialization agent. The interest in parental influences on children's behavior is based on a general acceptance of the idea that parents, over time, through their beliefs, behavior, and child-rearing practices have pervasive effects on children.

Parent Personality Characteristics

Studies involving the relationship between parent characteristics and empathy and prosocial behavior have usually focused on nurturance as a parental tendency. Nurturance is characterized as a group of behaviors expressing love and acceptance (both as a reward and a noncontingent response), and concerned caregiving (Eisenberg, 1982). Somewhat positive (Feshbach, 1978; Rutherford & Mussen, 1968) and inconsistent findings (Baumrind, 1971) have been reported with regard to parental nurturance as an influence on children's empathy and prosocial responses. A positive relationship between parental nurturance and children's empathy and prosocial behavior would seem to imply that 1) children imitate or learn such nurturing tendencies and behavior, and/or 2) children of nurturing parents have some other common characteristic which is related to their own prosocial tendencies and behavior (such as being well-adjusted, as suggested by Mussen & Eisenberg-Berg, 1977).

Another possibility suggested by some research findings, yet not explored to a great extent, is as follows: perhaps the parental characteristics of needing or requesting such behaviors as nurturance in children are related to children's prosocial tendencies and behavior. That is, parents who solicit emotional support, comforting or nurturing from their children may actually be encouraging prosocial tendencies and behavior. By providing many opportunities for children to take the perspective of others and to respond prosocially to their emotional needs, parents may facilitate the development of empathy and prosocial behavior. Several studies have indirectly supported this idea. Studies that have attempted to increase the role taking ability of children

through training have reported increases in role taking abilities (Iannotti, 1978). Similarly, Feshbach (1979) found that empathy training procedures resulted in increases in children's empathy levels.

There is also evidence that children who have been exposed to comparatively higher levels of parental dependency and need for their emotional support show higher rates of comforting and helping behavior. Rehberg (1986) found that in single parent families, parents reported being more dependent on their children for emotional support and for help with household chores. The dependency of the parent was related to comforting behavior in children, and the number of chores done by the child at home was correlated with helping behavior. In addition, it might be expected that children with a large number of siblings, especially younger and more dependent siblings, would exhibit relatively higher levels of prosocial responding to others. However, neither birth order nor number of siblings has been found to be related to prosocial behavior.

Child-rearing Practices

More specific parental techniques, such as strategies for disciplining children, have been linked to prosocial dispositions and behavior in children. Three techniques in particular have been studied: Power assertion is control by physical punishment, or deprivation of material objects or privileges; Love withdrawal is ignoring or isolating the child, or refusing to speak to him or her; and Induction is reasoning with the child, explaining the consequences of actions and how they might affect other people. Of these three techniques, induction or reasoning has been found to relate most closely to empathy and prosocial

behavior in children. Hoffman and other researchers (Hoffman & Saltzstein, 1957; Dlugokinski & Firestone, 1974; Feshbach, 1973; Barnett, King, Howard & Dino, 1980) report that reasoning and emphasizing the feelings of others in disciplinary situations is significantly related to children's prosocial behavior. In naturalistic and observational studies of childrearing, patterns of behavior rather than individual techniques are considered, with similar findings reported. Radke-Yarrow et al. (1983) caution, however, that power-assertive techniques can have differential effects depending on their use in response to various child behaviors.

Purpose

The present study is designed to identify and clarify the relationships between 1) naturally observed, 2) task-measured, and 3) contrived or elicited instances of children's role-taking, prosocial behavior, and sharing behavior, in particular. Further, it is intended to illuminate possible relationships between prosocial behavior and children's temperament characteristics, parental personality characteristics, and parents' child-rearing techniques.

Hypotheses

1) It was hypothesized that the three role-taking tasks would be correlated with a child's total score of prosocial behavior from observations in the classroom.
2) The parent practices were predicted to be significantly correlated with prosocial behavior scores. Parent practices were also predicted to be related to observed sharing with peers and sharing as measured in the contrived situation.

3) A child's temperament ratings were predicted to be related to his or her total score for observed prosocial behavior, specifically, the two temperament areas of activity and sociability.

4) It was expected that the I.Q. measure would be significantly correlated with the three tasks for role-taking, due to the cognitive nature of these tasks.

5) The number of siblings and birth order of each child were considered, as such variables could be related to the number of role-taking opportunities a child would have in the home environment (and subsequently, role-taking abilities, prosocial behavior, and sharing, in particular). Previous research does not support specific predictions regarding such a relationship.

6) It was hypothesized that a combination of particular parental disciplinary techniques and/or temperament ratings could be used to predict a given child's score for prosocial behavior and sharing.

7) The parent dependency score was predicted to be positively correlated with the prosocial behavior score. This relationship was expected to be more pronounced for single-parent families than for those in which both a mother and father or step-father were present in the home.

METHOD

Subjects

The subjects were 26 five and six-year-old children (mean age = 5.8) enrolled in a public school kindergarten in Winston-Salem, North Carolina, and the mothers of these children. Subject variables were dispersed as they naturally occurred in the classroom group (See Table 17).

Materials

Child Measures

Role Taking Tasks. Three different types of role-taking tasks were administered to each child: 1) a perceptual role taking task, 2) a cognitive role taking task, and 3) an affective role taking task (See Appendices A, B, & C for a more complete description of the child measures).

The perceptual role taking task (Flavell et al., 1968) consisted of a photo cube with a different picture on each of four sides. The cube was placed on the table and turned so that one picture faces the child. Then, an identical cube was given to the child, who was asked to turn the cube so that he or she could see on his or her box the same picture that the experimenter could see on her box (the picture opposite the one the child can see, which is not in his or her view). The child chose one of the four pictures on the sides of the cube.

The cognitive role taking task consisted of a display of children's coloring books, toys, puzzles, novels, and historical books (with small print and no pictures), a picture of an automobile, a pearl necklace, a necktie, and a rattle. The child was asked to choose a birthday gift

for him- or herself, his or her mother and father, a same gender and opposite gender child his or her age, and a baby.

The affective role taking task (Part II of the procedure used by Borke, 1971) consisted of eight stories. The children were presented with the stories which described their behaving toward another child in ways that might make the other youngster feel happy, sad, or angry (i.e., sharing candy, refusing to let him or her play, pushing him or her off a bike, etc.). The child was shown four pictures of faces (each with a happy, sad, angry, or fearful expression) and he or she was asked to point to the face which best indicated how the other child felt in each situation. A score of 1 was given for each correct match.

Each role taking task was scored as successful if the child was able to take the perspective of the experimenter (in the perceptual task) or of hypothetical adults or children (in the cognitive and affective tasks). For example, if, on the perceptual task, the child was able to turn the cube so that he or she saw what the experimenter (with a physically different visual perspective) saw, the response was considered successful. Successful responses on the cognitive role taking task were "appropriate" selections of gifts which typically would appeal to either an adult or another child. On the affective role taking task, a correct match between the choice of facial expression and the story character's situation (and the emotion it would elicit in the character) was considered a successful response.

I.Q. Measure. The Peabody Picture Vocabulary Test (Revised Form M) was given to the children during a separate visit by the experimenter, as a measure of each child's I.Q. The test which has been standardized

for use with ages 2.5-40 is designed primarily to measure a subject's receptive (hearing) vocabulary for "Standard American English." The test is in the form of a picture booklet from which subjects are asked to identify the pictured object that go with the names of objects (See Appendix D for the record sheet used).

Observations of Prosocial Behaviors

Before the actual study began, a series of classroom observations were conducted with a different sample of 5-year-old children than those involved in the study. Naturally occurring prosocial behaviors (as defined by the criteria shown in the next section) were recorded and described by a female experimenter. The same process was repeated over a period of 2-3 weeks with the children actually involved in the study. The experimenter verbally recorded prosocial behaviors observed in small groups of children within the regular classroom setting. A trained assistant periodically rated the same groups of children so that inter-rater reliability was computed for 20% of the total observation time.

Definitions of Prosocial Behaviors

Sharing behavior - a behavior was considered as sharing if it: 1) was a direct attempt to give to another person an object or part of an object, such as food, toys, or classroom materials; and, 2) occurred in the absence of distress in the recipient, to differentiate sharing from instrumental helping or comforting behaviors.

Helping behavior - a behavior was considered as "helpful" if it: 1) occurred in response to the needs of another person who had some sort of mishap (distress); 2) appeared to be an attempt to assist someone

(who was not distressed) in completing a task, or doing a chore; 3) was a direct instrumental response to another person (i.e., giving the person assistance in a task, joining in picking up dropped objects, handing the person a needed object to relieve distress, such as a paper towel for cleaning up a spill; or 4) was an indirect helping act, such as enlisting the assistance of a third party to help the "needy" individual.

Comforting behavior - a behavior was considered to be comforting if it: 1) occurred in response to the obvious distress (crying, wincing, frowning, whimpering) of another person; 2) was either a verbal or nonverbal attempt to soothe or alleviate distress, such as reassuring statements, or such physical initiations as patting, touching, stroking, hugging; or 3) involved bringing to the distressed person a desirable object (desirable to either the comforter or the distressed person; an object in which either individual has expressed an interest, such as a favorite toy.

Cooperative behavior - a behavior was considered cooperative if it: 1) was an instrumental attempt to assist another person in a task or chore which he or she was performing, or beginning to perform; 2) occurred in the absence of distress in the other person, to differentiate cooperating from helping and comforting behaviors; 3) involved an action similar to the criteria for sharing (such as the giving of an object to another person), yet, was distinct from sharing, in that the object given was one which was necessary or important for the completion of the task or chore being performed by the recipient

(such as handing another person a needed puzzle piece, or classroom material, or joining in an activity.

Affection - a behavior was considered to be affection if it: 1) involved a physical expression of positive affect for another person, such as patting, touching, stroking, hugging; and 2) occurred in the absence of distress in the other person, to differentiate affection from comforting behaviors.

Defending - a behavior was considered to be defensive if it: 1) occurred in response to an aggressive action or threat against another person made by a third person; and 2) involved an attempt to protect or support the other person, either by direct intervention (i.e., telling a bully to leave the other person alone), or by indirect intervention (i.e., telling the teacher, or other adult to help the victim).

Showing - a behavior was considered to be showing if it: 1) was an attempt to display an object or activity to another person; 2) involved getting another person's attention, and seeking some form of approval (i.e., an approving glance or response from the other person); 3) did not involve actually giving the object to the other person; and 4) occurred in the absence of distress in the other person, to differentiate showing from comforting behavior.

Episode - a single episode of prosocial behavior was considered to have ended and another episode to have begun when: 1) the child carried on the same activity with a different peer (i.e., a child sharing a cookie with 1 child and then giving a cookie to another child would be coded as 2 separate episodes; a child giving one, then another cookie to the same peer would be coded as only one episode); or 2) the child

ceased the activity. A behavior was also considered to be of a single episode if 3) the same two peers carried out the same activity over an extended period of time (i.e., two children cooperating in a game for a period of 10-15 minutes would only be coded once as a single episode of behavior.

Situationally Elicited Prosocial Behavior

Since sharing was a frequently occurring behavior in the natural classroom situation, a contrived sharing situation was set up separately by the experimenter. Children were randomly assigned to pairs within the classroom. For each pair of children, one was randomly assigned to a condition in which he or she would receive a small amount of an attractive snack (1 cookie) and the other child of the pair would receive a large amount of the attractive snack (10 cookies). The children were left at a separate table in an isolated corner of the classroom for 5 minutes after the experimenter told them that she had brought them a special snack. During the five-minute interval, the children's behavior was observed from across the room by the experimenter. This procedure is adapted from one used by Birch and Billman (1986). A quantitative measure of sharing was made by combining the number of snack items shared and latency of sharing. After the 5-minute observation, the experimenter returned to the pair and asked the child who had received 10 cookies if he or she would like to share the cookies or return them to the experimenter so that other children in the class could have some. All of the children complied with this request, so that no child ate more than 4 or 5 cookies at one sitting.

Most children ate 2 or 3 cookies during the 5-minute period, saving the remaining 2 or 3 cookies for lunch period.

Adult Measures

Parental Permission. A parental consent form (see Appendix E) was sent home with each child before the actual study began. The study and its measures were described to the parent, and he or she was also asked to choose, out of a list of possible snack foods (to be used during the contrived sharing situation) which, if any, he or she would not like for the child to be given. This eliminated the possible problem of a child being given a snack which the parent considers unhealthy or undesirable for the child. The parent also was asked to give permission for the child to participate in the study.

Family Demographics. The mothers of the children were given a questionnaire (see Appendix F) regarding: 1) the number and ages of children in the family, 2) whether the parents are divorced, and if so, for how long has the child lived with mother, father, or both, and 3) what other adults live with the child.

Parental Dependence Measures

The mothers were asked to describe themselves on the Succorance subscale of the Edwards Personal Preference Scale (see Appendix G). These 13 pairs of items are designed to assess emotional dependency and need for support from other people. The items were rewritten to eliminate the forced choice format, and to refer more directly to the parent's emotional dependency on the child.

Parent Ratings of Child Behaviors

Rating of Child's Temperament

The mothers were asked to describe their children using the 30 item Colorado Childhood Temperament Inventory (Rowe & Plomin, 1977) which measures four dimensions of behavior in early childhood: sociability, emotionality, activity, and shyness. (see Appendix I). Parents rated the child on the above behavioral dimensions by selecting from a multiple choice of behaviors those which best described their child in the specific situation identified for each item. An example of one item from each factor is listed below:

1. Sociability - "Child is very sociable."
2. Emotionality - "Child tends to be somewhat emotional."
3. Activity - "Child is always on the go."
4. Shyness - Child takes a long time to warm up to strangers.

Ratings of Child's Social Behaviors and Parent Responses

To assess parental attitudes toward specific child social behaviors, twenty situations adapted from Borke's (1971) affective role taking situations and from situations which actually occurred during pilot observations were described to the mothers. For each situation, the mother was asked to indicate the degree to which she would be pleased or displeased if her child behaved in the manner described. These attitudes were indicated by the selection of a value on a 5-point Likert-type scale ranging from "very pleased" (1) to "very displeased" (5). The parents also were asked to answer the following question after each of the situations: "How would you respond to your child if he or

she behaved in this way?" The answers to this question were selected from a list of parent practices modified from those used by Hoffman and Saltzstein, 1967. Any practices which might be construed by parents as abusive (and therefore socially undesirable) were reworded or omitted by the experimenter during construction of the scale. The practices listed represented three categories: 1) power assertion - deprivation of material objects or privileges, or direct material reward for a behavior; 2) love withdrawal - techniques whereby the parent openly withdraws love (e.g., ignoring the child, turning his or her back on the child, refusing to speak to him or her); 3) induction regarding parents - referring to the consequences of the child's actions for the parent, such as specifically telling the child that he or she has hurt the parent, or that the parent is disappointed, or telling the child that he or she has pleased the parent; 4) induction regarding peers - referring to the consequences of the child's actions for the other child in the situation, such as telling the child that he or she has done something to make the other child happy or sad.

The parent put a 1, 2, and 3 by the practices she would be most likely to use in each situation. The responses were scored so that each parent received a total score for each of the four categories of child-rearing practices. This score served as an indicator of the degree to which the parent uses 1) power assertion, 2) love withdrawal, 3) induction regarding parents, and 4) induction regarding peers.

Demographic Information

The teachers were asked to provide basic information on the children, such as age, gender, race, and birth date.

Procedure

The order of procedure and the time needed for each measure are as follows: 1) Observations of classroom behavior were made over a period of 2 to 3 weeks. The recordings were made during periods lasting from approximately 30 minutes to 2 hours per day, during times identified by the teacher as periods which might permit a great deal of social interaction among the children, and b) times which would be convenient to her teaching schedule. 2) The role taking tasks were administered to each child individually. The total amount of time spent administering the tasks was 10 minutes per child. 3) The Peabody Picture Vocabulary Test was administered to each child individually and lasted approximately 15 minutes per child. 4) The contrived situation for eliciting sharing involved 5-10 minutes per child or pair of children.

The role-taking tasks were administered by the experimenter herself. The Peabody Picture Vocabulary Test, and additional observations (for reliability), were done by trained assistants (one female college student, and one female graduate student).

The measures completed by the parents required the following amounts of time, and were sent home to the parents through their children:

1) The Colorado Childhood Temperament Inventory - 10 minutes

2) Edwards Personal Preference Scale - Succorance Subscale - and Parent Practices and Attitudes - 15 minutes including items on a) divorce and b) number and ages of siblings.

The teachers were asked to provide basic demographic variables on each child before the observation phase of the study. This was done at

their leisure, and aided the experimenter and other raters in becoming familiar with each child, making observations easier.

RESULTS

Observations

The data on prosocial behaviors were collected during observations of naturally-occurring behaviors in the classroom, during periods lasting from 15-30 minutes; these data represents a total of 16 hours of observations over a 10-day period; approximately 2 hours were spent observing each child individually. Inter-rater reliability was computed for approximately 20% of the total observation time (3-4 hours). The percentage of agreement for the two raters was 73% for both defined prosocial and non-prosocial behaviors.

Subjects with incomplete data were included in all analyses for which they had scores. Hence, the n's will vary slightly for different analyses.

The observations were scored by giving each child 1 point within a specific category when he or she was observed to be engaging in a specific target behavior. Thus the means for each of the target categories shown in Table 1 represents the group mean frequency for the occurrence of each behavior. Each child was observed in approximately 1 prosocial act per ½ hour observation period. The most frequently occurring prosocial behaviors were cooperation ($\underline{m}$ = 2.63, SD = 1.89), and sharing ($\underline{m}$ = 1.00, SD = 1.34). Helping ($\underline{m}$ = .77, SD = 1.02), showing ($\underline{m}$ = .36, SD = .66), and affection ($\underline{m}$ = .36, SD = .95) occurred less frequently. The least frequent behaviors were defending ($\underline{m}$ = .05, SD = .21) and comforting ($\underline{m}$ = .09, SD = .29). The total score consisted of the sum of all observed prosocial behaviors for each child ($\underline{m}$ = 5.23, SD = 3.19). The sharing situation score (number of cookies shared +

time remaining in the 5 min. period) ($\underline{m}$ = 3.18, SD = 3.46) was added to the total score from observations to form a prosocial index for each child ($\underline{m}$ = 8.41, SD = 4.89). A sharing index ($\underline{m}$ = 4.18, SD = 3.79) was computed for each child by adding the scores for observed sharing and the sharing situation (see Table 1).

Parent Practices

Looking at the parent practices means shown in Table 2, the most frequent forms of discipline reported were induction regarding peers and power assertion. Love withdrawal was reported to be an infrequent discipline technique. Parent practices were significantly correlated with children's observed prosocial behaviors, supporting several of the hypotheses. Induction regarding parent was correlated with children's showing behavior ($\underline{r}$ = .50, $\underline{p}$ < .05) and love withdrawal was negatively related to children's cooperation ($\underline{r}$ = .46, $\underline{p}$ < .05). That is, parents who reasoned with their children and did not use love withdrawal techniques had children who were more cooperative and shared objects with their peers more frequently. It was also found that induction regarding parents was correlated with performance on the picture cube task of perceptual role-taking ($\underline{r}$ = .50, $\underline{p}$ < .05), while induction regarding peers was related to the Borke measure of affective role-taking ($\underline{r}$ = .60, $\underline{p}$ < .01). Children whose parents used reasoning which emphasized the feelings of others scored higher on the test of affective role-taking than those of parents using the other techniques. Intercorrelations between the various parent practices revealed that induction regarding peers was negatively related to the three other parent practices of love withdrawal ($\underline{r}$ = -.47, $\underline{p}$ < .05), induction

Table 1

Means for Observations of Prosocial Behaviors and Totals

Means Table

Variable	Mean	SD	Variance	N
Sharing	1.00	1.34	1.81	22+
Helping	.77	1.02	1.04	22
Showing	.36	.66	.43	22
Cooperation	2.63	1.89	3.58	22
Affection	.36	.95	.90	22
Defending	.05	.21	.05	22
Comforting	.09	.29	.09	22
Total	5.23	3.19	10.18	22
Sharing Situation	3.18	3.46	11.97	22
Prosocial Index (Total + Sharing Situation)	8.41	4.89	23.87	22
Sharing Index (Sharing + Sharing Situation)	4.18	3.79	14.35	22

+ Subjects with incomplete data were included in all analyses for which they had scores. Hence the N's will vary slightly for different analyses.

Table 2

Parent Practices: Means and Correlations with Prosocial Behaviors and Totals

Means Table

Variable	Mean	SD	Variance	N
Power Assertion	5.87	3.44	11.84	15
Love Withdrawal	.73	1.28	1.64	15
Induction Regarding Parents	2.93	2.15	4.64	15
Induction Regarding Peers	9.67	3.87	14.95	15

	Sharing	Helping	Showing	Cooperation	Affection	Sharing Situation
Power Assertion	.33	-.02	.12	.30	.22	.16
Love Withdrawal	-.02	.01	.03	-.46*	-.14	.00
Induction Regarding Parents	-.31	-.20	.50*	-.33	-.31	.36
Induction Regarding Peers	-.05	.13	-.40	.10	.06	-.31

(table continues)

	Defending	Comforting	Total	Prosocial Index	Sharing Index
Power Assertion	.01	.02	.37	.39	.24
Love Withdrawal	-.16	-.23	-.36	-.26	-.01
Induction Re:					
Parents	-.38	.11	-.37	.02	.27
Induction Re:					
Peers	.31	.09	.06	-.20	-.32

*$p < .05$

regarding parents ($r = -.47$, $p < .05$), and power assertion ($r = -.67$, $p < .01$) (see Table 3).

The temperament ratings of the children (made by their mothers) in Table 4 show the children to be a fairly typical group with regard to temperament. In general, they were rated to be higher in sociability and activity, slightly lower in emotionality and low in shyness. They were correlated with observations of prosocial behavior and sharing in particular. High scores on the activity subscale were associated with higher frequencies of observed sharing behavior ($r = .58$ $p < .01$). Ratings of sociability were correlated with a composite prosocial index which was comprised of the total number of prosocial behaviors from observations and performance in the sharing situation ($r = .47$, $p < .05$). Surprisingly, shyness was also related to this prosocial index.

In order to see which variables would best predict a child's prosocial behavior and sharing, a stepwise multiple regression analysis (Table 5) was performed with the prosocial index (total from observations and the sharing situation) as the criterion and the following variables as predictors: sociability, emotionality, activity, and shyness (temperament ratings of children); power assertion, love withdrawal, induction regarding parents, and induction regarding peers (parent practices). The multiple predictors of prosocial behavior were sociability ($R = .53$, $R^2 = .29$, $p < .05$) and shyness ($R = .75$, $R^2 = .57$, $p < .01$). Again, the presence of both sociability and shyness is probably due to their respective relationships to the total score from observations and the sharing situation, which make up the prosocial index. When the sharing score from observations was used as the

Table 3

Parent Practices: Intercorrelations and Correlations with Role-Taking Measures

	Power Assertion	Love Withdrawal	Induction Re: Parents	Induction Re: Peers
Power Assertion		-.07	-.20	-.67**
Love Withdrawal	-.07	1.00	.41	-.47*
Induction Re: Parents	-.20	.41	1.00	-.47*
Induction Re: Peers	-.67**	-.47*	-.47*	1.00

	Role Taking Measures		
	Birthday Gift	Borke	Picture Cube
Power Assertion	-.08	-.37	-.18
Love Withdrawal	-.10	-.42	.11
Induction Re: Parents	.24	-.12	.50*
Induction Re: Peers	-.004	.60**	-.16

Table 4

Temperament Ratings: Means and Correlations with Prosocial Behaviors and Totals

Means Table

Variable	Mean	SD	Variance	N
Sociability	27.19	6.24	38.96	16
Emotionality	15.44	4.66	21.73	16
Activity	20.19	3.78	14.30	16
Shyness	8.81	2.46	6.03	16

	Sharing Situation	Sharing	Helping	Show-ing	Cooper-ation	Affection
Sociability	.28	.20	.17	-.18	.38	.18
Emotionality	.10	.10	-.20	.14	.01	-.14
Activity	.18	.58*	.17	.12	-.11	.27
Shyness	.38	-.09	.08	.09	.21	.19

(table continues)

	Defending	Comforting	Total	Prosocial Index	Sharing Index
Sociability	.08	-.14	.37	.47*	.34
Emotionality	.03	.34	.00	.08	.13
Activity	.27	.19	.34	.37	.36
Shyness	.24	.19	.24	.47*	.36

*$p < .05$, **$p < .01$

Table 5

Multiple Regression Coefficients for Predictors of Prosocial Behavior and Sharing Scores

Variable Name	Beta	t	R	R^2	R^2 Change
Prosocial Behavior					
Sociability	.534	2.28	.53	.29	.29*
Shyness	.551	2.82	.75	.57	.28**
Sharing Score (from observations)					
Activity	.582	2.68	.58	.34	.34*

*$p < .05$, ** $p < .01$

criterion, (and the four temperament ratings are predictor variables) the single best predictor of sharing was the temperament rating of activity ($R = .58$, $R^2 = .34$, $p < .05$) (see Table 5).

In order to determine which measures were best at discriminating between high and low scorers, discriminant function analyses were performed using high and low scoring groups for observed prosocial behaviors, sharing situation and combined indices as criterion groups. All other variables which were not components of the criterion group scores were available for entry in stepwise fashion as discriminating variables. The high and low groups were determined for high and low sharing groups (scores from observations), there were 9 variables which contributed to discrimination between groups. Such prosocial behaviors as defending, and comforting, and the temperament factors of sociability and emotionality contributed to the discriminant function, as did I.Q. score, love withdrawal by parents, and race, gender, and birth order. A very different group of variables combined to discriminate between high and low sharers determined by a median split from the sharing situation as seen in Table 6. The two prosocial behaviors of helping and cooperation, along with the temperament subscore on activity, induction regarding peers (as used by parents), the Borke and picture cube measures of affective and perceptual role-taking, and I.Q. score were included in the discriminant function. The different discriminant functions for observed sharing ($R = .89$, $R^2 = .79$) and sharing in the contrived situation ($R = .82$, $R^2 = .67$) accounted for similar proportions of the variance between groups. The chi-squares for both functions (observed sharing: $X^2 = 23.7$, $p < .01$; sharing situation:

Table 6

Results of Discriminant Function Analyses of Sharing from Observations

Variable	Standardized Coefficient	F to Enter (1, 20)	F to Remove
*Defending	1.02	3.86	4.37
*Comforting	.87	.88	2.26
*I.Q.	.84	1.04	4.73
Love Withdrawal	1.16	.85	7.76
*Sociability	.50	.43	1.57
*Emotionality	1.44	1.13	13.14
*Race	.48	2.77	1.86
*Gender = Male	1.55	1.45	13.92
*Birth Order	1.58	.56	11.96

Canonical R = .89

$X^2 = 23.70$, $p < .01$

*indicates that the higher sharing group also scored higher on these measures

*Gender = Female

*Race = Black

$X^2 = 18.24$, $p < .05$) indicate that the functions were significantly able to predict group membership (see Table 7).

Between high- and low-scoring groups on the sharing index (observed + situational sharing), 10 variables contributed to discrimination between groups as seen in Table 8. Five of these variables were also used to discriminate between sharing situation scores (Borke, Cube, helping, cooperation, and induction regarding peers), 2 had been used in the function for observed sharing discrimination (sociability, gender), and 3 variables (showing, power assertion, and shyness) were added to discriminate the sharing index groups ($R = .92$, $R^2 = .85$; $X^2 = 28.24$, $p < .005$). Variables loading highly on the discriminant function were power assertion, induction regarding peers, and marital status as seen in Table 9.

To discriminate between high, medium, and low scorers on the prosocial index (total from observations + sharing situation) two functions were formed as seen in Table 10. The variables contributing to discrimination between low and medium groups were: I.Q., love withdrawal, and cooperation. Discriminating between medium and high were sociability, emotionality, the Borke role-taking test, marital status, the birthday gift role-taking task, and shyness. The first function accounted for 99% of the variance between groups ($R = .99$, $R^2 = .99$; $X^2 = 64.14$, $p < .00001$). The second function also had a high canonical correlation ($R = .96$, $R^2 = .92$; $X^2 = 18.36$, $p < .05$).

Role-taking

The hypothesis stating that the three role-taking tasks would be correlated with the total prosocial behavior score from observations was

Table 7

Results of Discriminant Function Analyses of Sharing Situation

Variable	Standardized Coefficient	F to Enter (1, 20)	F to Remove
*Borke	1.18	1.92	7.20
*Cube	.50	.82	1.00
Helping	.94	3.11	6.57
*Cooperation	.64	.96	2.60
I.Q.	.62	.39	2.56
Induction Re: Peers	.85	1.99	3.50
*Activity	.69	1.09	4.12

Canonical R = .82

$X^2 = 18.24$, $p < .05$

*indicates that the higher sharing group also scored higher on these measures

Table 8

Discriminant Function Analysis of Sharing Index (Sharing from observations + Sharing Situation)

Variable	Standardized Coefficient	F to Enter (1, 20)	F to Remove
*Borke	1.69	3.20	13.09
*Cube	.57	.32	1.01
Helping	-.98	7.64	6.65
*Showing	.48	.78	1.70
*Cooperation	.70	.67	2.14
*Power Assertion	-1.20	.55	3.68
Induction Re: Peers	-2.31	2.13	12.44
*Sociability	.94	.42	5.99
*Shyness	1.21	1.56	8.82
Gender	.64	.00	2.27

Canonical R = .92

$X^2 = 28.24$, $p < .005$

*indicates that the higher sharing group also scored higher on these measures

Table 9

Discriminant Function Analysis of Total Score from Observations

Variable	Standardized Coefficient	F to Enter (1, 18)	F to Remove
*Borke	-7.98	1.76	48.20
*Cube	6.58	1.24	16.26
I.Q.	-5.60	.20	11.77
Marital Status	12.64	.24	35.33
*Power Assertion	22.98	3.77	112.93
Induction Re: Peers	15.21	1.50	45.68
*Emotionality	-3.83	.14	6.18
*Activity	-3.83	2.05	13.48
*Race	5.17	.94	6.35
*Gender	-15.96	.86	107.03

Canonical R = .99

$X^2 = 34.20$, $p < .0005$

*indicates that subjects higher on sharing also scored higher on these measures

*Gender = Female

*Race = Black

Table 10

Discriminant Function Analysis of Prosocial Index

Variable	Function 1 Standardized Coefficient	F to Enter (2, 12)	F to Remove	Function 2 Standardized Coefficient	Between Groups
*Borke	21.95	1.57	250.09	.49	2 and 3
Cube	-12.98	.40	79.01	1.88	2 and 3
Parent Dependency	14.80	.85	70.99	.85	2 and 3
Marital Status	17.39	.21	59.27	2.63	1 and 2
*Power Assertion	2.76	.32	4.64	8.41	2 and 3
Love Withdrawal	-17.04	1.94	53.13	5.27	1 and 2
Induction Re:					
Peers	-28.30	.38	71.39	7.00	1 and 2
*Sociability	-6.11	1.54	19.66	-.01	2 and 3
*Activity	22.04	1.51	205.02	-.42	2 and 3
*Gender	4.98	.40	12.57	-3.38	1 and 2
*Birth Order	3.03	1.00	2.37	-.28	2 and 3

Canonical R = .99 Canonical R = .96

$X^2 = 64.14$, $p < .00001$ $X^2 = 18.36$, $p < .05$

*indicates that subjects higher on the prosocial index are also higher on these measures

* Gender = Female

not supported by the results in Table 11. The cube task for perceptual role-taking, the birthday gift task for cognitive role-taking, and the Borke task for affective role-taking were not significantly correlated with prosocial behavior. The cube task for perceptual role-taking was negatively related to cooperation as observed in the classroom (r = -.41, $p < .05$) and to defending as observed in the classroom (r = -.45, $p < .05$). Children who were better at taking another person's perspective were less cooperative and protective of others. The perceptual role-taking task was significantly related to the parent practice of induction regarding parents (r = .50, $p < .05$). The parents of these children used reasoning which centered around their own feelings. The affective role-taking task was correlated with induction regarding peers (r = .60, $p < .01$). Children who were better at identifying the emotions of the story character in different situations had parents who reasoned with them by emphasizing the feelings of others.

The results were not consistent with the other hypothesis regarding the relationship between the role-taking tasks and the I.Q. measure. The correlation between the cognitive role-taking task and the I.Q. measure (the Peabody Picture Vocabulary Test) approached significance (r = .35, p = .053), as did the relationship between the affective role-taking task and the I.Q. measure (r = .36, p = .051). The perceptual role-taking measure was also not significantly related to I.Q. (r = .15, p = .26) (see Table 6). Thus, children better at identifying spoken vocabulary words tended to be better at selecting age-appropriate gifts for others and identifying the emotions of a story character.

Table 11

Role-Taking Measures: Means and Correlations with Prosocial Behaviors

Means Table

Variable	Mean	SD	Variance	N
Birthday Gift	8.68	1.7	2.80	22
Borke Test	10.68	1.6	2.42	22
Picture Cube	1.5	.7	.55	22

	Sharing Situation	Sharing	Helping	Showing	Cooperation
Birthday Gift	-.09	.04	.01	.20	-.28
Borke Test	.30	.11	-.02	-.21	.15
Picture Cube	.05	-.12	.35	.20	-.41*

	Affection	Defending	Comforting	Total
Birthday Gift	.26	.18	.26	.01
Borke Test	-.11	.05	.07	.06
Picture Cube	-.34	-.45*	-.22	-.29

(table continues)

	Prosocial Index (Total + Sharing Situation)	I.Q.	Sharing Index (Sharing + Sharing Situation)
Birthday Gift	-.06	.35	-.07
Borke Test	.25	.36	.31
Picture Cube	-.16	.15	.00

*p <.05

Parent Dependency

Contrary to the hypothesis, the parent dependency score was negatively correlated with two individual prosocial behaviors and the total score from observations (see Table 12). A parent's dependency score was negatively related to a child's affection ($r = -.48$, $p < .05$), comforting behavior ($r = -.51$, $p < .05$), and the total score from observations of prosocial behavior ($r = 0.47$, $p < .05$). Thus, highly dependent mothers had children who were less affectionate, less comforting, and less prosocial, overall. However, parent dependency scores were negatively associated with marital status (single status was coded as 1 and married as 2, thus single would be "lower") ($r = -.47$, $p < .05$), and positively correlated with the use of love withdrawal as a childrearing technique ($r = .46$, $p < .05$) (see Table 7). Highly dependent mothers tended to be single and to use love withdrawal. The number of siblings and birth order were not significantly related to role-taking scores, or to sharing behavior, as seen in Table 13. The relationship between observed comforting behavior and birth order approached significance, with some correspondence between the number of older siblings and comforting ($r = .42$, $p = .051$). Children who were born later, as opposed to first or only children, tended to exhibit comforting behavior more often.

Individual Variables

The relationship of gender, race, parents' marital status, and high vs. low dependency to prosocial behaviors, sharing, and combined indices was of interest. However, analyses of variance were not appropriate due to the small size of many of the cell combinations. A two-tailed t-test

Table 12

Parent Dependency: Mean and Correlations with Prosocial Behaviors, Demographic Variables, and Parent Practices

Means Table

Variable	Mean	SD	Variance	N
Parent Dependency	30.75	5.16	26.60	16

Variable	r	Variable	r
Prosocial Behaviors			
Sharing	-.28	Marital Status	-.47
Helping	.06		
Cooperation	-.24	Demographic Variables	
Showing	.07	Race	.12
Affection	-.48*	Gender	-.05
Defending	-.40	Age	.31
Comforting	-.51*	Birth order	-.41
Total	-.47*	# of Siblings	-.41
Prosocial Index	-.21		
Sharing Index	.06		

(table continues)

Variable	r
Parent Practices	
Power assertion	-.13
Love Withdrawal	.46*
Induction Re: Parents	.12
Induction Re: Peers	-.13

*$p < .05$

Table 13

Number of siblings and birth order: Means and Correlations with Role-Taking Tasks, Prosocial Behaviors, Sharing Situation, and Combined Indices

Means Table

Variable	Mean	SD	Variance	N
# of Siblings	1.25	.86	.73	16
Birth Order	1.63	.81	.65	16

Variable	# of Siblings r	Birth Order r
Birthday Gift	-.06	-.20
Borke	.33	.23
Picture Cube	.24	-.08
Prosocial Behaviors		
Sharing	-.09	.07
Helping	.00	-.09
Showing	.10	.39
Cooperation	.05	.20
Affection	-.07	-.08
Defending	-.08	.12

(table continues)

Variable	# of Siblings r	Birth Order r
Comforting	.11	.42*
Total	.00	.23
Sharing Situation	.26	.06
Prosocial Index	.21	.20
Sharing Index	.24	.08

*approaching significance

comparison was made between group mean scores on observed sharing behavior for males and females, with the mean for females significantly higher than that for males, t (1, 20) = 5.40, $p < .02$. Females were observed to share more often in the classroom. (See Table 14). Another two-tailed comparison revealed that the mean score on the total from observations of prosocial behavior was higher for children whose parents were married, than for children of single-parent families, t (1, 14) = 46.91, $p < .005$ (see Table 15).

Observations

Several of the categories within the observations of prosocial behavior were intercorrelated. Comforting was associated with defending ($r = .69$, $p < .005$) and affection ($r = .56$, $p < .005$), and affection and defending were correlated ($r = .85$, $p < .005$). Children who showed more comforting behavior during observations also defended others more often and showed affection more often than children who did not comfort others as often. In addition, children who were more affectionate also defended others more often than those lower in the expression of affection.

The results supported or partially supported a number of the hypotheses. In addition, those findings which do not support, or are contrary to predictions, provide an interesting pattern of relationships. As is often the case in research involving prosocial behavior in children, this study raises as many questions as it answers.

Table 14

Two-Tailed t-Test comparisons: Gender

Variable	Number of Cases	Mean	SD	df	t	p
Prosocial Index						
Males	11	8.27	4.29	20	1.72	>.05
Females	11	8.55	5.63			
Sharing Index						
Males	11	3.73	3.61	20	1.28	>.05
Females	11	4.64	4.08			
Total						
Males	11	4.91	2.39	20	2.72	>.05
Females	11	5.55	3.93			
Sharing Situation						
Males	11	3.36	3.33	20	1.27	>.05
Females	11	3.00	3.74			
*Sharing						
Males	11	.36	.67	20	5.40	<.05
Females	11	1.64	1.57			

Table 15

Two-Tailed t-Test comparisons: Marital

Variable	Number of Cases	Mean	SD	df	t	p
Prosocial Index						
Males	5	8.80	4.44	14	1.16	>.05
Females	11	9.09	4.78			
Sharing Index						
Males	5	5.60	3.58	14	1.04	>.05
Females	11	4.09	3.51			
*Total						
Males	5	4.60	.55	14	46.91	<.005
Females	11	5.55	3.75			
Sharing Situation						
Males	5	4.20	4.27	14	1.56	>.05
Females	11	3.55	3.42			
*Sharing						
Males	5	1.40	1.14	14	1.49	<.05
Females	11	.55	.93			

Table 16

Intercorrelations Among Observations of Prosocial Behavior

	Sharing	Helping	Showing	Cooperation	Affection	Defending	Comforting
Sharing	___	-.01	.18	-.08	.27	.34	.25
Helping	___	___	.13	-.07	.04	.05	-.09
Showing	___	___	___	.03	-.14	-.12	.31
Cooperation	___	___	___	___	.13	.04	.06
Affection	___	___	___	___	___	**.85	**.56
Defending	___	___	___	___	___	___	**.69

**$p < .005$

DISCUSSION

Hypotheses

It was hypothesized that the role-taking tasks, parent practices, temperament ratings, and parent dependency would be significantly correlated with prosocial behaviors. A hypothesis was also made regarding a combination of particular parent practices and/or temperament ratings which would best predict a given child's score for prosocial behavior and sharing. The I.Q. measure was expected to be significantly correlated with the role-taking tasks. The number of siblings and birth order of each child were considered in terms of their possible relationship to a child's role-taking opportunities in the home environment, and subsequently, role-taking abilities, prosocial behavior, and sharing.

Parent Practices

The results obtained supported the hypothesized relationship between parent practices and children's observed prosocial behaviors. Induction regarding parents was related to children's showing behavior. The mothers who used induction regarding parents frequently selected "Tell him/her that he/she has hurt my feelings" as a response to negative child behaviors, and "Tell him/her that what he/she said or did made me very happy" as a response to prosocial behaviors. Children whose parents reported frequent use of this type of technique exhibited a relatively high rate of showing objects or activities to others (i.e., "Look what I made!," or "Watch me!"). These results are generally consistent with those of Hoffman and Saltzstein (1967) and Dlugokinski and Firestone (1974), who found that the mother's use of inductive

(reasoning) disciplinary techniques was related to peer ratings of prosocial tendencies in children. Such findings lend support to the belief of Hoffman and others that inductive techniques (as opposed to power assertion) should foster empathy and prosocial behavior in children by emphasizing the feelings of others and the consequences of the child's own actions for other people. However, parents reporting the use of induction regarding parents selected practices which emphasize the feelings of the parent herself in regard to disciplinary situations with the child. It would seem that induction regarding peers would be the technique most closely associated with prosocial behaviors in the classroom among peers. This discrepancy may be due to the nature of the particular behavior associated with induction regarding parents.

Showing behavior often involved the child's seeking the attention and approval of another person; many times the person targeted for showing behavior was a teacher, the experimenter, or one of her assistants (i.e., "Look what I made, teacher! Do you like it?"). It is possible that children whose parents use induction regarding themselves as a disciplinary technique are more aware of and interested in the attention and approval of adults than children whose parents use other techniques, such as induction regarding peers, love withdrawal, or power assertion. Parents who used this form of reasoning (which emphasizes their own feelings) had children who exhibited fewer sharing, helping, cooperative, affectionate, and defensive behaviors in interacting with peers. Thus, induction regarding parents seems to be related only to showing. This particular technique of reasoning may encourage

children's sensitivity to the feelings of adults, while decreasing the frequency of their prosocial interactions with peers.

The finding of a significant negative correlation between love withdrawal as a child-rearing technique and cooperative behavior is consistent with some previous research. In Baumrind's (1978) research, love withdrawal, as part of a pattern of parental controlling techniques, was associated with withdrawal and distrust in children. In the present study, parents who selected "Show him/her I don't like it by not talking to him/her for a while" as a technique had children who engaged in cooperative behavior less frequently. It is possible that these children withdraw from or are more hesitant to initiate interactions with peers than those whose parents use other childrearing techniques.

Two techniques were significantly related to role-taking measures: induction regarding parents was correlated with the picture cube perceptual role-taking task, and induction regarding peers was related to the Borke measure of affective role-taking. The relationship between parent practices and role-taking has not been a focus for research, although both factors have been linked to prosocial behavior in children. The relationship between induction regarding peers and the Borke test (which asks the child how another child would feel in a number of different emotional situations) is supported by Iannotti's (1978) study which used role-taking training to increase role-taking abilities in 5- and 9-year-olds. Children who were "trained" in role-taking (by actually assuming and explaining the roles of characters in skits) performed better on a role-taking task than those who did not

receive the training. In another study (Dlugokinski & Firestone, 1974), children whose parents used inductive techniques responded to inductive, rather than power-assertive appeals for charity. Thus, it would seem that parents who emphasize reasoning which includes the feelings of others foster this type of thinking and awareness of others' emotions, which is assessed by the Borke role-taking task. No further link between induction, role-taking, and prosocial behavior can be supported by the present study, however.

Role-taking

It was predicted that the three role-taking tasks, the picture cube (perceptual), birthday gift (cognitive), and Borke (affective) role-taking tasks would be significantly correlated with observed prosocial behaviors. The tasks were carefully selected for their relevance to actual situations (the cognitive and affective role-taking tasks, in particular), and for their orientation toward people and their thoughts and feelings. However, the present results, along with those of many previous studies, do not support such a relationship (Kurdek, 1978; Rushton & Weiner, 1975; Waxler, Yarrow, & Smith, 1977). The Borke and birthday gift task had non-significant correlations with observed prosocial behaviors, and the picture cube task was significantly and negatively related to defending and to cooperation as observed in the classroom. An interesting pattern of relationships emerged with the finding of a significant negative relationship between perceptual role-taking and cooperation: induction regarding parents is also negatively related to cooperation, but is significantly and positively related to perceptual role-taking as measured by the picture cube task.

It seems possible that particular skills are fostered by the parent practice of induction regarding parents and are measured by the picture cube task. These same skills are negatively related to cooperation in the classroom. There is no evidence in the literature at present to support or explain this pattern, although there seems to be an underlying cognitive and behavioral dimension in these results.

The cognitive aspect present in all three of the role-taking tasks was expected to appear through positive correlations with the Peabody Picture Vocabulary Test, which was used as an indicator of I.Q. The correlations between I.Q. and the birthday gift (cognitive) task, and the Borke (affective role-taking) test approached significance. The picture cube (perceptual role-taking) task was also non-significantly correlated with I.Q. One explanation for the marginally closer relationship of the cognitive and affective role-taking tasks to I.Q. is that they were more highly verbal in content than the perceptual task, and the I.Q. measure used (Peabody Picture Vocabulary Test) was obviously highly verbal in content, as well. The Peabody was used because of its relationship to more complete I.Q. measures (r with WISC = .64; (Dunn & Dunn, 1981), and because of the ease in administration. Had the relationship between role-taking and I.Q. been a major focus of the study, a more complete assessment of I.Q. (including performance subscales) might have been employed to illustrate a relationship between role-taking and I.Q.

The role-taking tasks can assess, to a degree, the understanding a child has of other people's viewpoints, feelings, and thoughts. Yet, the measures' (cognitive and affective role-taking) dependency on

language may exclude some children who are skilled at understanding others. For example, in this sample of children, there were several foreign-born children who were being taught English for the first time in the kindergarten class. While they were fairly proficient, their scores on the cognitive and affective role-taking tasks (and also on the I.Q. measure) were well below the class average. However, on behavioral indices, these children were average or above-average in prosocial behavior ratings. Several of these children appeared to be quite skilled at interpreting others' thoughts and feelings; yet, because they may not have understood the English words for describing particular situations and emotions, their role-taking scores (on the affective measure, in particular) were quite low. Thus, the role-taking scores, for these children, in particular, did not correspond to their prosocial behavior or to their actual role-taking abilities.

Family Variables

Another expected relationship which was not supported by the present results was the possible relationship of birth order and the number of siblings with role-taking scores and sharing behavior. It was posited that a greater number of siblings and a later ("higher") birth order might indicate greater opportunities for role-taking and prosocial interactions for a child at home. The relationship between one behavior, observed comforting, and birth order approached significance, with some association between the number of older siblings and comforting. This trend is supported by studies (Miller & Maruyama, 1976; Deutsch, 1981) reporting that later-born children, as opposed to firstborns, demonstrate greater social skills, are involved in more

prosocial interactions, and are more popular among peers. The explanation offered for such findings is that because of the relationship between age and status which occurs in childhood (Moore, 1969), later-born children are lower in the hierarchy of power within the family. Thus, in order to receive a fair share of positive outcomes from interactions with older siblings, they must develop their interpersonal skills to a greater degree than firstborns, who possess more control over interactions. Children who had older brothers and/or sisters showed more comforting behavior toward other children in the classroom than did oldest or only children. This might indicate that compared with older or only children, these children have had more experience in prosocial interactions with other children, such as being comforted by an older sibling; later children may simply have learned more about such interactions with other children than firstborns. It is also possible that these children are more adept at nurturing types of behavior in general which they have learned in order to negotiate with or accommodate older and more "powerful" brothers and sisters, as suggested by Miller and Maruyama (1976).

Parent Dependency

Another variable which was expected to be related to comforting, specifically, and to prosocial behavior in general, was that of the parents dependency on the child. Rehberg (1986) found parent dependency to be related to comforting behavior in children. In the present study, mothers higher in dependency had children who were less affectionate, showed less comforting behavior, and were less prosocial, in general (i.e., had lower total scores from observations). The inconsistency

between the Rehberg study and the present work may lie in the particular measures of parent dependency. The more highly dependent mothers in this study rated themselves as engaging more often in behaviors described by statements such as, "I like my child to encourage me when I meet failure," "I like my child to be sympathetic and understanding when I have problems," and "I like my child to make a fuss over me when I am sick." The items used in the Rehberg (1986) study were, "On a five point scale, indicate": 1) "how much you share your feelings about things from emotional feelings to family and personal problems with your child," 2) "how much you depend on your child to help you and the family out with chores and household responsibilities," and 3) "how much you depend on your child for you to discuss problems and share emotional burdens with" (p. 57). The primary difference between these items and those used in the present study is the Rehberg item regarding dependence on the child for help in chores. This type of dependence was not included in the present study.

In addition, the items used in the present study are more highly emotional and contain more negative hypothetical situations than the measure used by Rehberg, and thus, the type of dependency they measure may be associated with real-life situations which are more unpleasant emotionally. It is possible that these mothers, in needing a high degree of nuturance, are unable to give it to their children, since they may be absorbed in their own problems to a greater degree than low-dependency mothers. It is interesting that these mothers use love withdrawal as a child-rearing technique more often than low-dependency mothers, and thus, may withdraw from or ignore their children more often

than low-dependency mothers. Love withdrawal, as discussed previously, was related to less cooperative behavior in children. However, the use of love withdrawal among this sample of mothers was very infrequent as compared to the other techniques of reasoning (induction) or direct controlling of privileges (power assertion). Thus, it is doubtful that the negative relationship between parent dependency and prosocial behaviors is due to the use of love withdrawal as a technique.

A more plausible explanation for the more highly dependent mothers' having less prosocial children may lie in the items used in this study to measure dependency. Perhaps mothers reporting a greater need for nurturance from their children when sick, depressed, or troubled have actually experienced such situations more often than low-dependency mothers. That is, the experiencing of a number of stressful situations would probably affect a child's behavior, in combination with maternal dependency, rather than the mother's personality traits, themselves. Single mothers were more dependent than those who were married; this might indicate that in unpleasant situations (if they, indeed, occurred more frequently for more dependent mothers), the child was involved more directly (more aware of problems) in the absence of a spouse with whom to share troubles. Such a possibility is an interesting prospect for future research.

Temperament

The proposed role of temperament in the prosocial behaviors of children has been supported by the present research, specifically, the involvement of activity and sociability. Children who were more active shared more than children rated by their mothers as lower in activity.

More sociable children had higher scores on the prosocial index, which included totals from observations and performance in the sharing situation. These findings are intuitively logical and are reminiscent of those reported by Murphy (1937) that prosocial behavior was related to a general index of children's activity level and involvement in social interactions. It is logical that more active, sociable children would be involved in and exposed to more opportunities for sharing and prosocial behavior in general, since they are probably involved in more interactions with other children than those lower in activity and sociability, who might prefer to play quietly or alone. This is not to say that these children are less prosocial, but rather, that the observational and situational measures required that the children be involved in peer interactions for the experimenter to observe and score prosocial behaviors. In fact, shyness was unexpectedly related to the same prosocial index with which sociability correlated. This seemingly paradoxical relationship may be difficult to explain: shyness and sociability seem to be opposite temperament categories. Why, then, are both shyness and sociability significantly related to the prosocial index?

One explanation may lie in the particular items comprising the temperament scale completed by the mothers. The sociability subscale consisted of items such as "My child likes to be with people," "My child prefers playing with others rather than alone," and "My child makes friends easily". Two of the shyness items were "My child tends to be shy," and "My child takes a long time to warm up to strangers". While sociability items involve the child's interactions with friends and

acquaintances, the shyness scale seems to focus on the child's reactions to strangers. Thus, a child could be rated as both highly sociable and shy. A shy child could show a great deal of prosocial behavior in the classroom among familiar friends and peers (which was true of children rated as shy), although these same children would be shy around unfamiliar people.

Another explanation may be the possible reactions of the mothers to the shyness subscale questions involving the child's interactions with "strangers." It may be that due to the current societal emphasis on missing children and the abuse of children by adults, mothers consider their children's hesitancy to "warm up to strangers" as a positive behavioral trait. Most parents caution their children against interacting with strangers; thus the shyness ratings on this measure may indicate a bias toward such behavior in their children on the part of the mothers. This would result in children's (who would not be typically shy in other respects) being labelled as shy. However, it could be that many children in the present cultural environment are actually shy around strangers, due to an understandable emphasis on educating children about the dangers of being friendly to strange adults. This intriguing combination of temperament characteristics bears further investigation.

The combination of shyness and sociability surfaced again when the best predictive equation for a child's prosocial index score was formed using these two temperament subscores. The selection of sociability and shyness as combined predictors of prosocial behavior serves to confirm the correlational findings of their involvement together. Once again,

children higher on sociability and/or shyness ratings showed more numerous instances of prosocial behavior. It would seem that the combination of being selectively friendly with friends and acquaintances while shy with strangers would characterize those children who most often exhibited the prosocial behaviors measured by the prosocial index (i.e., observed prosocial behavior in the classroom and in the sharing situation). By looking at the components of the prosocial index, it becomes apparent that sociability is more closely (although nonsignificantly) related to the total score from observations. Shyness is related in the same way to the sharing situation. More sociable children had slightly higher scores from observations of prosocial behavior, while shy children shared more during the one-on-one situation. This may indicate that the sharing situation provided an opportunity for shy children, (who may not be as prosocial within the large classroom group) to demonstrate prosocial tendencies. It is possible that shy children are less overt and obvious in their prosocial behavior, and thus, not as easily observed when the entire classroom is the focus for observing prosocial activities.

Behavioral Indices

The analyses which attempted to uncover the dimensions separating high and low scorers on the various behavioral indices also revealed complex patterns of scores on the discriminating measures. For example, in sharing scores derived from observations, the 3 characteristics which best separated high and low scores were birth order, gender, and emotionality. Children high in sharing tended to be later-born females who were rated as high in emotionality by their mothers. Low observed

sharers tended to be earlier-born males who were lower in emotionality. This pattern in itself does not explain why some children were observed to share more than others. Yet, taken in conjunction with the discriminating variables from the situational sharing scores, these combinations reveal the differences between these two sharing indices. The best predictors of high and low situational sharing were the Borke (affective) role-taking task, observed helping scores, and induction regarding peers as a parent practice. The high situational sharers were also higher on affective role-taking, but lower on helping and induction regarding peers (from their parents), and these high sharers were also higher on the cube (perceptual) role-taking task, cooperation, and activity. The high observed sharers (female, later-born, emotional) contrasted with high situational sharers (high role-takers, cooperative, and active) in terms of their scoring patterns. An interesting observation was made during the sharing situation. It seemed that the children who shared during the 5-minute period, did so quickly, when the difference between their 10 cookies and the other child's single cookie first became obvious. The children who did not share during the allotted time period often seemed distracted, looking around the room, rather than focusing on the situation and the other child involved. Thus, the sharing situation may have been tapping into cognitive, attentional, or perceptual factors, in addition to social or prosocial ones. Such an idea is supported by the finding that high situational sharers were also higher on perceptual and affective and role-taking, while observed sharers were higher in emotionality, comforting, and defending.

In comparing sharing from the observations to sharing in the situation there were obvious differences in the behavior of the children involved. Most of the sharing which occurred during the observations occurred during snack time for the class. Children who shared their snacks (brought from home) usually did so with peers who were sitting at their table, and with whom they generally interacted frequently. The sharing was carried out in a chatty, conversational way, with the giver offering an entire container of a snack out of which the recipient could take what he/she wished. On the other hand, the sharing during the situation, when it occurred, was conducted in a very precise, methodical way. When he/she noticed the discrepancy in the number of cookies given the two children, the giver usually counted out the exact number of cookies to be shared and presented them to the recipient.

It is interesting to note that the demand characteristics of the circumstances surrounding the two types of sharing resulted in two different types of sharing, performed by two different groups of children. While observed sharing seemed to be a spontaneous interactive event, situational sharing was a more pre-meditated, precise activity.

The combined sharing index (the total score from the two previous scores) was best separated into high and low groups by the use of induction regarding peers reported by parents, the affective role-taking score, and the shyness rating. Thus, yet, another complex pattern appears when the two assessments of sharing are combined: high scorers on the sharing index had high role-taking scores, high shyness scores, and low scores with regard to mothers' emphasis on the feelings of others. This creates, yet, a different picture of children higher on

the combination of sharing scores, with the cognitive (role-taking) aspect from the situational sharing component, and shyness included as a social characteristic.

The total score from observations revealed the following pattern of discriminating variables: highly prosocial children also exhibited a high degree of showing, cooperation, and comforting. These individual behaviors were observed to occur at a relatively high frequency, and thus, children who showed these behaviors more often had a higher total score, because of the role these behaviors played in comprising the total score.

For the prosocial index score (composed of observed and situational behaviors), two discriminant functions were formed to distinguish between high, medium and low prosocial children. The variables which best separated low and medium scoring groups were love withdrawal, induction regarding peers, and marital status. Medium prosocial children had married parents who used love withdrawal and reasoning which emphasized the feelings of others more often than low prosocial children. High prosocial children were distinguished from the medium group by having higher affective role-taking scores, single parents, and high activity scores. It is interesting that none of the variables were effective in separating high from low prosocial children; the parent techniques (love withdrawal and induction regarding peers) and the marital status of the parents (married) were strongly related to medium scores on the prosocial index. Low prosocial children had more dependent single mothers than did the high prosocial children, who also had single parents. These varying patterns for low, medium, and high

prosocial behavior bear further investigation in order to be interpreted in a meaningful way.

Conclusions

Some possible improvements for this study, made in retrospect, have implications for future research in this area. The observations of prosocial behaviors seemed to be a reasonable indication of the frequency and types of prosocial behaviors in the classroom. However, the coding scheme did not include accompanying gestures and expressions with prosocial observations. Such information may be useful in supporting behavioral descriptions in terms of the underlying cognitive and affective factors.

The sharing situation might have produced different results had it been videotaped in a separate room from the classroom, as in the Birch and Billman (1986) study. Although the effects of the experimenter's presence and the placement of the sharing situation within the classroom (in an unused corner) are not obvious, the measure may not have provided an accurate indication of children's tendencies to share.

Had it been possible in the present study, additional information on the parents and family environment of the children might have provided an indication of further relationships to prosocial behavior. For example, such variables as socioeconomic status and parent's education level may have shown relationships to parent practices and prosocial behaviors. A measure of the number and type of stressful life events experienced by the parents may have added to the information gained from the parent dependency measure (as mentioned previously).

In general, the results of this project confirmed some previous expectations. Temperament was a strong factor in predicting children's prosocial behavior (although in a surprising way, with shyness included), and parent practices were also related to prosocial behavior in children. Role-taking, in general, was not related to prosocial behavior, and perceptual role-taking was negatively related to several isolated behaviors from observations. Role-taking was, however, related to parent practices which emphasized reasoning and the parent's or others' feelings. Why, then, is role-taking unrelated to behavior?

This familiar question can be answered in an equally familiar way: role-taking measures simply can not assess the complex cognitive and affective factors which must underlie prosocial behavior. From the inconsistent relationships of role-taking measures to prosocial behaviors in children, it can be concluded that other methods of measuring underlying cognitive and affective components of prosocial behavior might produce more conclusive results. The observational approach to empathy measurement advocated by Hoffman (1982) and by Radke-Yarrow, Zahn-Waxler, and Chapman (1983) would seem to be appropriate in conjunction with observations of prosocial behaviors. That is, observations of gestures and expressions which accompany prosocial behaviors may be better indicators of the cognitions and emotions underlying such behaviors as they occur in the context of the interaction as a whole. Role-taking tasks may be measuring responses to situations which do not generalize well to observed classroom behaviors.

Within the observations themselves, there were several correlations among the various categories of prosocial behavior. It was found that

children who comforted other children also defended and showed affection toward others. Children who were affectionate also defended others. These categories were combined and analyzed in the form of totals and prosocial or sharing indices. However, none of the other categories were interrelated, and as discussed previously, the individual categories were each associated with different child temperament and parent practices. This indicates that the construct of prosocial behavior may not be a unitary one. This interpretation is further supported by Rehberg's (1986) data where in contrived situations, comforting and helping were not significantly related. That is, the different categories of behaviors obviously involve different capacities to different degrees, as shown by the characterizations of high scorers on various combinations of behaviors (through discriminant function analyses). The concept of prosocial behavior is probably still useful to researchers in classifying behaviors, in that the thoughts and feelings of others are generally thought to be involved in all the categories. It might be useful to consider separating prosocial behaviors into several dimensions of related categories, such as the affection, defending, comforting (nuturant) dimension which appeared in the results of the present study. Such a separation would require that patterns of intercorrelations resulted in dimensions within prosocial observations.

Observations are useful in that they are able, to a limited degree, to capture behavior as it occurs in the classroom, and, yet, it became apparent during this study that the behavioral information which was recorded was equalled in importance by observations which could not be

coded or categorized, given the scope of the present study. Such information as specific gestures or expressions indicating the emotional content of certain interactions might have provided additional support (for the observations of behavior) regarding underlying cognitions and emotions. There is a great deal to be learned by spending an extended amount of time in the kindergarten classroom (4 weeks during this study, in particular), as it is an environment in which complex prosocial interactions take place with astounding frequency (approximately, 3.25 per observed hour). It is often impossible to attend to all the interesting interactions which are occurring simultaneously among peers, children, and teachers, and children and experimenter. By becoming an integral and familiar part of a classroom environment, an experimenter witnesses the subtle cues and circumstances which accompany prosocial behaviors, such as whether behavior is voluntary or coerced, or performed grudgingly or cheerfully. The interrelationships between an entire group of children and their teachers are revealed as patterns of prosocial behavior emerge. Incorporating such observations without also injecting biases into experimenter observations is probably impossible, but their value to our knowledge of prosocial interactions is invaluable.

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APPENDIX A

Subject Variables

Individual Variables

Race	White	Black	Oriental	Hispanic
n =	9	11	4	2

Gender	Male	Female
n =	14	12

Family Variables

Birth order	1st	2nd	3rd
n =	14	7	5

# of siblings	0	1	2	3	4	5	6	7
n =	9	9	5	1	0	1	0	1

Marital status	Single	Married
n =	10	16

Marital status by race

	Single	Married
Black	9	2
White	1	9
Oriental	1	3
Hispanic	0	2

APPENDIX B

Affective Role-Taking--Interpersonal Awareness Scale, Part B

A child is presented with the following stories and is asked to choose the appropriate emotional expression for the hypothetical child in each story. The child makes his/her selection by placing one of four available cut-out faces on a picture of a child. Each of the four faces has either a happy, sad, angry, or fearful expression. Different sets of faces are used for black or white males or females.

CARNEGIE-MELLON UNIVERSITY

Interpersonal Awareness Test

Part II

Name:_____ Date of Birth:_____

Age:_____ Date:_____

Examiner:_____

Instructions: Now I am going to tell you some more stories only this time there will be just this one picture of Nancy (Johnny) to put the face on. Examiner shuffles faces making sure the "happy" face is not on top. Show me how Nancy (Johnny) would feel if you let her play with your toys. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Examiner circles the face selected by the subject:

Happy Sad Afraid Mad None

Why do you think Nancy (Johnny) would feel _____ if you let her play with your toys? .

NOTE: Examiner reshuffles pictures before each story and circles child's responses.

1. Show me how Nancy (Johnny) would feel if you gave her some ice cream. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____? H S A M

2. Show me how Nancy (Johnny) would feel if she wanted to play with you and you couldn't play because it was too late. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____? H S A M

3. Show me how Nancy (Johnny) would feel if you broke her favorite toy. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____? H S A M

4. Show me how Nancy (Johnny) would feel <u>if you pushed her down and she got hurt</u>. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____? H S A M

5. Show me how Nancy (Johnny) would feel <u>if you pretended to be a ghost and ran after her in the dark.</u> Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____? H S A M

6. Show me how Nancy (Johnny) would feel <u>if you left her and went to play with someone else.</u> Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____? H S A M

7. Show me how Nancy (Johnny) would feel <u>if she just finished building a tower of blocks and you knocked it down.</u> Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____? H S A M

8. Show me how Nancy (Johnny) would feel <u>if you told her a ghost story.</u> Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____? H S A M

9. Show me how Nancy (Johnny) would feel <u>if you tore her best drawing into little pieces.</u> Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____? H S A M

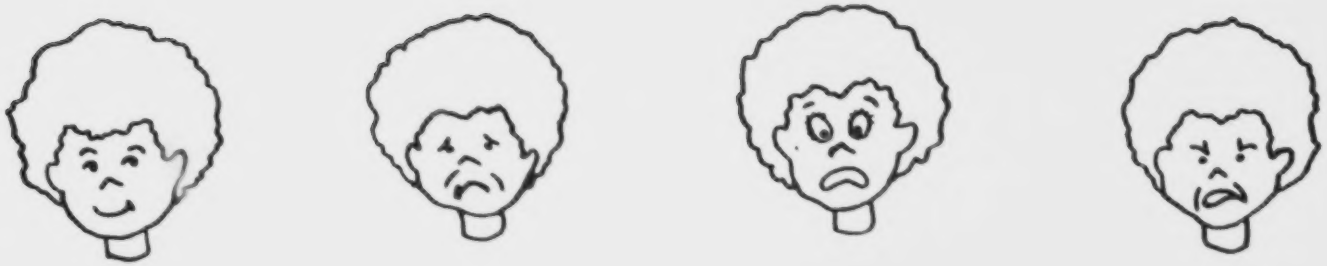
10. Show me how Nancy (Johnny) would feel <u>if you said something bad about her father or mother</u>. Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____? H S A M

11. Show me how Nancy (Johnny) would feel <u>if you wouldn't let her play with you.</u> Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____? H S A M

12. Show me how Nancy (Johnny) would feel <u>if you invited her to come and play with you.</u> Would she feel (examiner names emotions according to sequence). Pick up the face you think and put it on the picture. Why do you think Nancy (Johnny) would feel _____?

Wide Girl

Wide Boy



Black Girl

Black Boy

APPENDIX C

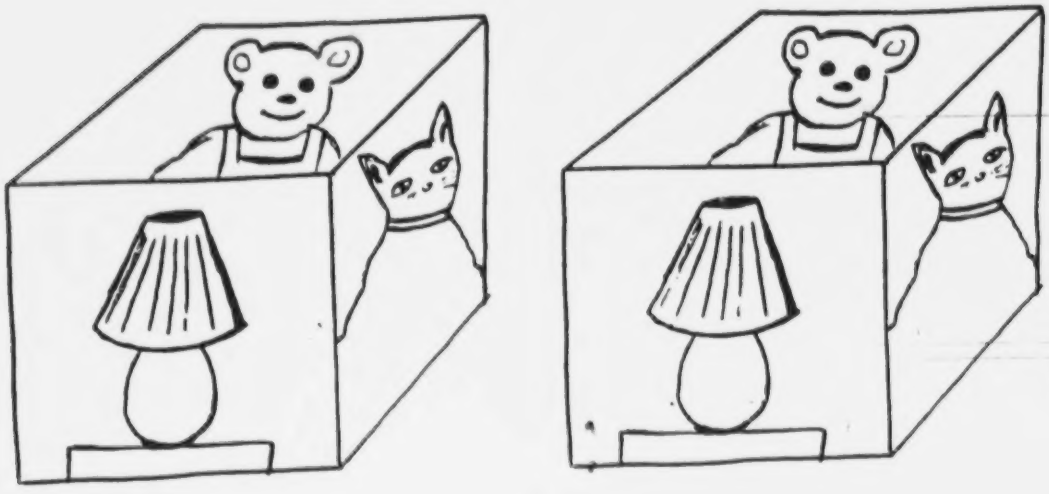
Cognitive Role-Taking Task--Birthday Gift

The child is asked to select a birthday gift for him--or herself, for a same gender and opposite gender child his or her own age, for mother, for father, and for a baby from the following array of objects: children's coloring books, toys, puzzles, novels (with small print and no pictures), a photograph of an automobile (a magazine advertisement), a pearl necklace, a necktie, and a rattle.

APPENDIX D

Perceptual Role Taking Task--Picture Cube

The picture cube task consisted of two identical cardboard cubes with identical photographs attached to the six sides. The photographs contained the following subjects: a smiling baby, a cat, a lamp, a six-year old boy, a stuffed toy bear, and a dog playing in snow.



The experimenter took one of the cubes and turned it so that a particular photograph was facing her. The child could not see the photo facing the experimenter, but he or she could see the photo facing him, on the opposite side of the cube from the photo facing the experimenter. The child was asked to decide at which photo the experimenter was looking, and to turn his or her cube so that he or she could see the same photo the experimenter was seeing. Thus, the child had to find the photo opposite the one he or she could readily see on the back of the experimenter's cube.

APPENDIX E

Peabody Picture Vocabulary Test

Instructions for Subjects Under Age Eight

Training Plates A, B, and C are used. Introduce the test by saying:

"I want you to look at some pictures with me."

Turn to Training Plate A and say,

"See all the pictures on this page." (Indicate this by pointing to each of the four in turn.) "I will say a word; then I want you to put your finger on the picture of the word I have said. Let's try one. Put your finger on (Training Plate A initial practice word)."

If the subject makes the correct response, turn to Training Plate B, saying:

"That's fine. Now put your finger on (Training Plate B initial practice word)."

If the subject again makes the correct response, turn to Training Plate C, saying:

"Good! Show me (Training Plate C initial practice word)."

From the outset, if the subject chooses the wrong illustration, before going on to the next plate, point out the correct response while saying, for example:

"You made a good try, but this is the correct answer."

At the same time, briefly explain why the answer is correct. Repeat the item until the subject makes the correct response; then go on to the next item. With very young and learning disabled children, training with additional practice words may be needed to establish the desired

pointing behavior. In such cases, use as many of the series of alternate words as needed. Continue through the training plates until the subject responds correctly to a complete cycle of three consecutive words without your help.

With very immature subjects, the examiner will need to establish the pointing response by first saying,

"Put your finger on ___(practice word)___."

and then placing the child's finger on the correct picture. After a few trials, the examiner may take the lead by pointing and then encouraging the subject to do likewise. The length of time required to establish the desired pointing behavior will vary from child to child. Training plates may be repeated. If the desired response has not been established after a number of trials, however, the test should be discontinued and the subject declared untestable with the PPVT-R. Experience has shown that this seldom happens if adequate use is made of the training plates.

When the desired pointing behavior has been established, turn to the correct starting point, as shown on the test record. Then say:

"Fine! Now I am going to show you some other pictures. Each time I say a word, you find the best picture of it. When we get further along in the book, you may not be sure you know the meaning of the word, but I want you to look carefully at all of the pictures anyway, and choose the one you think is right. Point to ___(starting point word)___."

When the desired response has been established, turn to the correct starting point plate, as indicated on the test record, and say,

"Fine! Now I am going to show you some other pictures. Each time I say a word, you say the number of, or point to, the picture which best tells the meaning of the word. As we go through the book you may not be sure you know the meaning of some of the words, but look carefully at all of the pictures anyway and choose the one you think is right. What number is (starting point word)"?

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FORM M | TEST ITEMS AND ABBREVIATED INSTRUCTIONS

Administering the TRAINING ITEMS

For most subjects under age 8: Use Plates A, B, and C. Administer as many training item series as necessary to secure three consecutive correct responses. For most subjects age 8 and over: Use Plates D and E. Administer as many training item series as necessary to secure two consecutive correct responses.

Plate	Item	Appropriate response	Inappropriate response 1	Inappropriate response 2	Inappropriate response 3
A	bird (1)	baby (2)	spoon (4)	dog (3)	
B	chair (4)	banana (3)	birds (1)	kitten (2)	
C	sleeping (2)	eating (1)	crawling (3)	crying (4)	
D	ship (2)	airplane (4)	canoe (3)	truck (1)	
E	mopping (1)	riding (2)	sawing (4)	mowing (3)	

(Complete directions are given in Part I of the Manual.)

Administering the TEST ITEMS

Basal: Highest 8 consecutive correct responses.
Ceiling: Lowest 8 consecutive responses containing 8 errors.
Starting Point: For a subject assumed to be of average ability, find the person's age circled in the margin, and begin the test with that item. Otherwise consult Part I of the Manual for further instructions.
Recording Responses and Errors: Record the subject's response (1, 2, 3, or 4) for each item administered. For each error, draw an oblique line either through the plate number of the item missed, or through the geometric figure as illustrated below:

12 full ... (3) 2 ▽ or 12 full ... (3) 2 ▽

Every eighth figure is identical to help determine the basal and ceiling. (Complete directions are given in Part I of the Manual.)

NOTE: Ages in circles refer to the lowest age on a 6- or 12-month interval. For example, Item 1 is the starting item for ages 2-0 through 2-5, and Item 39 for ages 5-0 through 5-5. Use Item 1 for ages 14-0 and over.

Plate	Item	Key	Response	Error
1	car	(2)		○
2	ball	(4)		‖
3	money	(3)		△
4	broom	(2)		‖
5	bee	(3)		▽
6	bottle	(1)		☆
7	circle	(4)		◇
8	candle	(2)		○
9	plant	(1)		‖
10	reading	(4)		△
11	ladder	(2)		‖
12	hill	(3)		▽
13	mail	(4)		☆
14	horn	(1)		◇
15	pulling	(1)		( )
16	neck	(3)		‖
17	gate	(2)		△
18	kangaroo	(2)		‖
19	lock	(3)		▽
20	kite	(1)		☆
21	desk	(3)		◇
22	pouring	(4)		○
23	farmer	(4)		‖
24	broken	(1)		△
25	picking	(4)		‖
26	ambulance	(1)		▽
27	somersault	(2)		☆
28	lime	(3)		◇
29	bush	(1)		( )
30	whale	(2)		‖
31	wooden	(2)		△
32	catching	(4)		‖
33	cobweb	(3)		▽
34	river	(3)		☆
35	track	(1)		◇
36	peeking	(4)		○
37	pail	(1)		‖
38	sharing	(3)		△
39	caterpillar	(3)		‖
40	branch	(2)		▽
41	saddle	(2)		☆
42	dentist	(3)		◇
43	eagle	(2)		( )
44	rough	(4)		‖
45	counter	(1)		△
46	uniform	(4)		‖
47	jewelry	(1)		▽
48	furniture	(3)		☆
49	crown	(1)		◇
50	hugging	(2)		( )
51	liquid	(4)		‖
52	ankle	(4)		△
53	floating	(1)		‖
54	binocular	(3)		▽
55	wrist	(2)		☆
56	hive	(4)		◇
57	argument	(1)		( )
58	printing	(4)		‖
59	waiter	(3)		△
60	root	(2)		‖
61	walrus	(2)		▽
62	swamp	(1)		☆
63	angle	(2)		◇
64	jaw	(4)		( )
65	entertainer	(1)		‖
66	directing	(2)		△
67	artist	(3)		‖
68	shore	(2)		▽
69	paw	(3)		☆
70	ceiling	(4)		◇
71	secretary	(4)		( )
72	cliff	(1)		‖
73	flaming	(3)		△
74	funnel	(3)		‖
75	woolly	(4)		▽
76	nutritious	(3)		☆
77	construction	(2)		◇
78	thimble	(1)		○
79	grain	(4)		‖
80	furious	(1)		△
81	sorting	(1)		‖
82	musician	(2)		▽
83	greeting	(3)		☆
84	competition	(3)		◇
85	weary	(3)		○
86	antler	(4)		‖
87	harvesting	(1)		△
88	snarling	(2)		‖
89	plastering	(3)		▽
90	triplet	(4)		☆
91	assisting	(1)		◇
92	grooming	(2)		○
93	tropical	(2)		‖
94	scholar	(4)		△
95	applauding	(4)		‖
96	bugle	(2)		▽
97	nuisance	(1)		☆
98	gnawing	(3)		◇
99	easel	(3)		○
100	compass	(2)		‖
101	escorting	(4)		△
102	wedge	(3)		‖
103	beverage	(1)		▽
104	cuticle	(4)		☆
105	arctic	(2)		◇
106	pod	(3)		○
107	fragment	(3)		‖
108	banister	(1)		△
109	composer	(4)		‖
110	archaeologist	(4)		▽
111	parallel	(4)		☆
112	astonish			
113	liberated			
114	portable			
115	physicia			
116	canine			
117	agricult			
118	solar			
119	precipita			
120	hovering			
121	amphibi			
122	dome			
123	descend			
124	embrace			
125	judicial			
126	mason			
127	final			
128	lubricate			
129	porcelain			
130	appreci			
131	beacon			
132	allive			
133	nape			
134	salutation			
135	concave			
136	incisor			
137	dwelling			
138	grazing			
139	illumination			
140	submerging			
141	laminated			
142	convergence			
143	angler			
144	receptacle			
145	enticing			

APPENDIX F

Parental Consent Form

WAKE FOREST

Psychology Department

Dear Parent:

I am a second-year graduate student in psychology at Wake Forest. For my thesis project I am studying prosocial behaviors (sharing, helping, comforting, cooperation) in preschool children. The study will involve my being an observer in the classroom, and giving the children (individually) 3 tasks of role-taking, and a picture-vocabulary task. The three tasks will ask the children to tell what another person, from a different point of view, sees, thinks, and feels. I will also be giving the children a snack during one of my visits, so I will need to know which, if any, foods you would not like for me to give to your child.

The amount of time spent with your child individually will be about 15 minutes during each of 3 visits, for a total of 45 minutes. The time I spend with the children will usually be during snack time or play time, so that their learning time will not be interrupted.

There will also be some questionnaires which I will need your help in filling out. The questionnaires contain questions about your child's general personality, and your attitudes about behaviors which children often do. These questions will take about 20-25 minutes for you to answer, and if it is convenient, you can answer them during your regular parent-teacher conference time. All information will be kept completely confidential. All response will be coded numerically and will be seen by me only.

I would greatly appreciate your help in my project. When I have finished the study, I will tell you about the results. Please feel free to ask my advisor or me any questions you might have. Thank you for your time and consideration.

Sincerely,

Suzanne H. Cain
Graduate Student
Wake Forest University

Dr. Deborah L. Best
Associate Professor
Wake Forest University

Please return the following form to school with your child only if you do not give permission for your child to participate, or if you will not allow him or her to have any of the following foods as a snack.

I will not allow my child to have (Please check)
___ Cookies ___ Raisins ___ Peanuts ___ Graham crackers ___ Saltine crac

I will allow him or her to have: (please list)

_____

___ I will not allow my child to participate

_____ _____
Signature of parent Child's name

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APPENDIX G

Family Demographics

APPENDIX H

Parental Dependence Measure

Parents and Children

Please circle the number which shows how each statement relates to you.

1. I like my child to encourage me when I meet failure.

5 always 4 3 sometimes 2 1 never

2. I like my child to feel sorry for me when I am sick.

5 always 4 3 sometimes 2 1 never

3. I like my child to treat me kindly.

5 always 4 3 sometimes 2 1 never

4. I like my child to make a fuss over me when I am hurt or sick.

5 always 4 3 sometimes 2 1 never

5. I like my child to sympathize with me and to cheer me up when I am depressed.

5 always 4 3 sometimes 2 1 never

6. I like my child to be sympathetic and understanding when I have problems.

5 always 4 3 sometimes 2 1 never

7. I like my child to help me when I am in trouble.

5 always 4 3 sometimes 2 1 never

8. I like my child to do many small favors for me cheerfully.

5 always 4 3 sometimes 2 1 never

9. I like my child to show a great deal of affection toward me.

5 always 4 3 sometimes 2 1 never

10. I like my child to sympathize with me and to cheer me up when I am depressed.

5 always 4 3 sometimes 2 1 never

11. I like my child to be sympathetic and understanding when I have problems.

5 always 4 3 sometimes 2 1 never

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Parent Ratings of Child Behaviors

Please rate your attitudes toward the following behaviors from 1 (very pleased) to 5 (very displeased) by circling one number. Also, put a 1, 2, and 3 beside the letters (A, B, C, D, E, F, G) which correspond to the responses (listed on the Parent Responses sheet). This is to indicate, in order, which responses you are most likely to make in each situation. Put a 1 by the letter of the response you would be most likely to make, a 2 by the second most likely, and a 3 by the third most likely response for each of the situations described.

1) How would you feel if your child shared his or her ice cream with another child?		1 very pleased	2 pleased	3 neutral	4 displeased	5 very displeased	
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___
2) How would you feel if your child tried to defend another child (by telling the teacher) from being picked on by a bully?		1	2	3	4	5	
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___
3) How would you feel if your child started to scream and cry when you told him/her to come in from playing with a friend?		1	2	3	4	5	
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___
4) How would you feel if your child broke another child's favorite toy?		1	2	3	4	5	
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___
5) How would you feel if your child shared his/her favorite toy with another child?		1	2	3	4	5	
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___
6) How would you feel if your child pushed another child and made the other child fall and cry?		1	2	3	4	5	
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___

7) How would you feel if your child offered to help another child build a castle out of blocks?

	1 very pleased	2 pleased	3 neutral	4 displeased	5 very displeased
What would you do?	A ___ B ___	C ___	D ___	E ___	F ___ G ___

8) How would you feel if your child scared another child by pretending to be a ghost and running after the other child in the dark?

	1	2	3	4	5
What would you do?	A ___ B ___	C ___	D ___	E ___	F ___ G ___

9) How would you feel if your child helped another child with a picture he/she was drawing?

	1	2	3	4	5
What would you do?	A ___ B ___	C ___	D ___	E ___	F ___ G ___

10) How would you feel if your child left another child to play with someone else?

	1	2	3	4	5
What would you do?	A ___ B ___	C ___	D ___	E ___	F ___ G ___

11) How would you feel if your child knocked down a tower of blocks which another child had just finished building?

	1	2	3	4	5
What would you do?	A ___ B ___	C ___	D ___	E ___	F ___ G ___

12) How would you feel if you asked your child to do something and he/she said that he/she would do it as soon as a television program is over in half an hour?

	1	2	3	4	5
What would you do?	A ___ B ___	C ___	D ___	E ___	F ___ G ___

13) How would you feel if your child agreed to take turns with another child in playing with a toy which they both wanted?

	1	2	3	4	5
What would you do?	A ___ B ___	C ___	D ___	E ___	F ___ G ___

		1 very pleased	2 pleased	3 neutral	4 displeased	5 very displeased
14) How would you feel if your child tore another child's best drawing into little pieces?						
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___
15) How would you feel if your child talked back to you in an angry voice, shouted, or mumbled something angry under his/her breath?		1	2	3	4	5
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___
16) How would you feel if your child cooperated with other children in making up and playing a game?		1	2	3	4	5
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___
17) How would you feel if your child said something bad about another child's mother or father?		1	2	3	4	5
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___
18) How would you feel if you knew for certain that your child had done something he/she shouldn't have done, and yet when you asked him/her about it, he/she denied doing it?		1	2	3	4	5
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___
19) How would you feel if your child invited another child to play with him/her?		1	2	3	4	5
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___
20) How would you feel if your child wouldn't let another child play with him/her?		1	2	3	4	5
What would you do?	A ___	B ___	C ___	D ___	E ___	F ___	G ___

Parent Responses

A. Tell her that she will be punished by not being able to have something she likes or do something she likes to do.

B. Show her I don't like it by not talking to her for a while.

C. Tell her that she has hurt my feelings.

D. Explain to her that something she said or did made another child feel bad, and ask her how she would feel in the same situation.

E. Tell her that what she said or did made me very happy.

F. Tell her that what she said or did made someone else very happy.

G. Tell her that she will be rewarded for her good behavior.

Parent Responses

A. Tell him that he will be punished by not being able to have something that he likes or do something he likes to do.

B. Show him I don't like it by not talking to him for a while.

C. Tell him that he has hurt my feelings.

D. Explain to him that something he said or did made another child feel bad, and ask him how he would feel in the same situation.

E. Tell him that what he said or did made me very happy.

F. Tell him that what he said or did made someone else very happy.

G. Tell him that he will be rewarded for his good behavior.

APPENDIX J

Ratings of Child's Temperament

Parent Ratings of Child's Temperament

Rate each item on a scale of 1 (not characteristic or typical of your child) to 5 (very characteristic or typical of your child). Please keep in mind that this is in reference to your child, _____.

1. My child tends to be shy.
   1 (not typical) 2 3 4 5 (very typical)

2. My child cries easily.
   1 (not typical) 2 3 4 5 (very typical)

3. My child likes to be with people.
   1 (not typical) 2 3 4 5 (very typical)

4. My child is always on the go.
   1 (not typical) 2 3 4 5 (very typical)

5. My child prefers playing with others rather than alone.
   1 (not typical) 2 3 4 5 (very typical)

6. My child tends to be somewhat emotional.
   1 (not typical) 2 3 4 5 (very typical)

7. When my child moves about, he/she usually moves slowly.
   1 (not typical) 2 3 4 5 (very typical)

8. My child makes friends easily.
   1 (not typical) 2 3 4 5 (very typical)

9. My child is off and running as soon as he/she wakes up in the morning.
   1 (not typical) 2 3 4 5 (very typical)

10. My child finds people more stimulating than anything else.
    1 (not typical) 2 3 4 5 (very typical)

11. My child often fusses and cries.
    1 (not typical) 2 3 4 5 (very typical)

12. My child is very sociable.
    1 (not typical) 2 3 4 5 (very typical)

13. My child is very energetic.

1 2 3 4 5
not typical very typical

14. My child takes a long time to warm up to strangers.

1 2 3 4 5
not typical very typical

15. My child gets upset easily.

1 2 3 4 5
not typical very typical

16. My child is something of a loner.

1 2 3 4 5
not typical very typical

17. My child prefers quiet, inactive games to more active ones.

1 2 3 4 5
not typical very typical

18. When alone, my child feels isolated.

1 2 3 4 5
not typical very typical

19. My child reacts intensely when upset.

1 2 3 4 5
not typical very typical

20. My child is very friendly with strangers.

1 2 3 4 5
not typical very typical

Vita

Suzanne Holloway Cain was born May 9, 1963 in Corpus Christi, Texas where she attended St. James Episcopal School. She was graduated from Red Bank High School in Chattanooga, Tennessee, and received the Bachelor of Arts degree (cum laude) in Psychology and Spanish from the University of the South at Sewanee, Tennessee. She is a candidate for the Master of Arts degree in Psychology from Wake Forest University in May, 1987. She plans to live in Washington, D.C., working in research with children before applying to doctoral programs in Clinical/Child Psychology in the Fall of 1988.